Field Activities Technical Memorandum
Jones Road Ground Water Plume Superfund Site
Remedial Design
Harris County, Texas

Remedial Action Contract 2 Full Service
Contract: EP-W-06-004
Task Order: 0070-RDRD-06NK

Prepared for

U.S. Environmental Protection Agency
Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

Prepared by

EA Engineering, Science, and Technology, Inc., PBC
405 State Highway 121 (Bypass)
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April 2020
Revision: 00
EA Project No. 14342.70

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Project Manager

April 2020

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LIST OF ACRONYMS AND ABBREVIATIONS

CLP	Contract Laboratory Program
CMT	Continuous Multichannel Tubing
DCE	Dichloroethene
EA	EA Engineering, Science, and Technology, Inc., PBC
EPA	U.S. Environmental Protection Agency
Eurofins	Eurofins Lancaster Laboratories Environmental
MNA	Monitored Natural Attenuation
PCE	Tetrachloroethene
QC	Quality Control
RA	Remedial Action
ROD	Record of Decision
RD	Remedial Design
SIM	Selective Ion Monitoring
site	Jones Road Ground Water Plume Superfund Site
VC	Vinyl Chloride
VI	Vapor Intrusion
VOC	Volatile Organic Compounds
WBZ	Water-bearing zone

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1. INTRODUCTION

EA Engineering, Science, and Technology, Inc., PBC (EA) has been authorized by the U.S. Environmental Protection Agency (EPA), under Remedial Action Contract No. EP W 06 004, Task Order 0070-RDRD-06NK, to conduct a Remedial Design (RD) at the Jones Road Ground Water Plume Superfund Site (site) located in Harris County, Texas. EA has prepared this Field Activities Technical Memorandum in accordance with: (1) Field Change Form No. 2 dated February 2018 and (2) the EPA-approved Work Plan (EA 2014).

1.1 PURPOSE

The purpose of this Technical Memorandum is to summarize the field activities included in Field Change Form No. 2 of the approved Work Plan. Results will be summarized in subsequent remedial action reports prepared under another task order.

2. BACKGROUND

The site is located in the northwest portion of Harris County, Texas (Figure 1), within the extraterritorial jurisdiction of Houston, Texas. The site background information is summarized in the following sections.

2.1 SITE BACKGROUND

The site contamination originated from the former Bell Dry Cleaners located at 11600 Jones Road, approximately 0.5 miles north of the intersection of Jones Road and Farm-to-Market Road 1960 (Figure 1). The site was proposed to the National Priorities List on 30 April 2003 (68 Federal Register 23094) and finalized on 29 September 2003 (68 Federal Register 55875).

The Cypress Shopping Center was constructed in 1984, and the former Bell facility began dry cleaning operations using perchloroethene (PCE; also known as tetrachloroethene) sometime in 1988. The former Bell facility continued operating through May 2002 when the dry cleaning operations were shut down. Volatile organic compounds (VOCs) are present at the site at concentrations that exceed Maximum Contaminant Levels (EPA 2020), including PCE and related daughter products trichloroethene, cis- and trans-1,2-dichloroethene, and vinyl chloride.

The area around the site is characterized by residential, commercial, and light industrial development. Residential development has been active since the 1960s, effectively eliminating wildlife habitat from the area. Jones Road is the principal north-south corridor through the area, and Farm-to-Market Road 1960 (approximately 0.5 miles to the south) provides a southwest-northeast corridor. Commercial development is dominant along Jones Road with residential and limited commercial development along the side streets. Cypress Creek is located approximately 1 mile to the northwest of the subject area, and White Oak Bayou is located approximately 3,500 feet to the south.

2.2 SUMMARY OF PREVIOUS INVESTIGATIONS

The site has undergone numerous investigations beginning in 1994 and continuing through 2015. From August 2003 to May 2008, a Texas Commission on Environmental Quality contractor performed a Remedial Investigation at the site, which characterized the nature and extent of constituents present in environmental media at the site. Soil, groundwater, and vapor intrusion samples were collected, and a bench scale treatability study was completed to evaluate the application of *in situ* chemical oxidation and bioremediation treatment technologies. Routine quarterly groundwater sampling was also performed.

Homes in the area have private water supply wells, and some homes share a single well with others. From January through November 2008, EPA conducted a time-critical removal action that included the installation of a water line and connections to homes and businesses associated with the site. Approximately 51 percent of the well owners in the immediate vicinity of the former Bell facility agreed to discontinue use of their water wells and use water supplied by the water line. The water line is serviced by the White Oak Bend Municipal Utility District.

The Record of Decision (ROD) for the site (EPA 2010) was signed on 23 September 2010, and it set forth the selected remedy for the site. One planned operable unit is planned for the site, and the selected remedial action (RA) is intended to address all areas of concern at the site. The selected remedy as described in the ROD is Alternative 4 (*In Situ* Enhancements to Pump and Treat). The *in situ* enhancements involve treating the soil and groundwater without removing them.

The current design phase has focused on an extensive hydraulic containment/pump and treat RA for contaminated groundwater for the Lower Chicot water-bearing zone (WBZ) and the Shallow WBZ. A field pilot project has also been conducted to confirm an *in situ* application for the Shallow WBZ, as well as the most effective amendments to degrade the contaminants.

In April 2013, the Jones Road project underwent further evaluation of the RD to optimize the remedial response to address soil and groundwater contamination to "achieve maximum protectiveness while improving cost and energy efficiency and minimizing time" to reach cleanup goals. The recommendations of the optimization team were formalized in the "Optimization Review, Jones Road Superfund Site, September 2014, EPA (542-R-14-006)" which redirected the sequencing of the project to prioritize source reduction of the Shallow Soil (soil gas), Shallow WBZ (groundwater), and the Unsaturated Chicot (soil gas). This approach targets the majority of the contaminant mass with the greatest potential for continued contribution of contaminants to the Lower Chicot Aquifer. Most importantly, the optimization review team recommended that the current design for hydraulic containments of the Lower Chicot groundwater plume be delayed indefinitely until the three sources areas, overlying the Lower Chicot Aquifer, are mitigated. Source reduction is expected to reduce contaminants and the underlying plume with time and will be verified with monitoring.

Several sampling events have been performed at the site in the last five years, including soil, groundwater, passive soil gas, and vapor intrusion. And additionally, in February 2018, as

recommended in the Jones Road Superfund Optimization Review report. The following field activities were completed to follow the Optimization Review Report findings and the subsequent selected remedies of soil vapor extraction and *in situ* bioremediation:

- Two vapor intrusion (VI) sampling events – 1 in spring/summer and 1 in fall/winter to evaluate seasonal variation
- One ground water sampling event that includes sampling of the 5 continuous multichannel tubing (CMT) wells and gauging of all site monitor wells
- Two ground water sampling events that includes collection of ground water samples from the 15 shallow site monitor wells.

3. REMEDIAL DESIGN FIELD PROGRAM

Section 3 summarizes the air and groundwater sampling activities that occurred during the RD field program. Summaries of the laboratory data and copies of laboratory reports were provided in the RA Report under Task Order 129. Copies of the field sampling forms, field notes, and photo log are included in Attachments A, B, and C, respectively.

EA performed field activities in accordance with the following plans:

- RD Work Plan (EA 2014)
- Health and Safety Plan (EA 2011a)
- Site Management Plan (EA 2011b)
- Sampling and Analysis Plan (EA 2011c)
- Sampling and Analysis Plan Addendum 1 (EA 2011d).

3.1 GROUNDWATER SAMPLING EVENT– SEPTEMBER 2017

A groundwater event was conducted from 11 through 13 September 2017. EA collected a total of 16 groundwater samples (including quality control [QC] samples), using the low-flow method and a bailer when necessary. The samples were analyzed for VOCs and metals and shipped to the EPA Region 6 Laboratory and the Contract Laboratory Program (CLP) Laboratory, respectively. Additionally, Monitored Natural Attenuation (MNA) parameters were collected and shipped to Eurofins Lancaster Laboratories Environmental (Eurofins). The latest gauging information data are shown in Table 1. The samples collected during this event are summarized in Table 2 and illustrated in Figure 2. Field copies of groundwater low-flow datasheets are included in Attachment A, logbook notes are included in Attachment B, and field photographs are included in Attachment C. The laboratory results were reported in the RA Report, which was submitted in 2019.

3.2 VAPOR INTRUSION EVENT – JUNE 2018

A VI event was conducted on 5 June 2018. EA collected a total of 9 soil gas samples (including QC samples). Air samples were collected using laboratory-supplied Summa canisters. The samples were analyzed for VOCs using method TO-15 selective ion monitoring (SIM) or TO-15 Low Level. The samples collected during this event are summarized in Table 3 and illustrated in Figure 3. Field copies of VI datasheets are included in Attachment A, logbook notes are included in Attachment B, and field photographs are included in Attachment C. The laboratory results are included in Attachment D.

3.3 GROUNDWATER CMT WELLS SAMPLING EVENT – MAY 2018

A groundwater event was conducted from 14 through 17 May 2018. EA collected a total of 26 groundwater samples (including QC samples). Groundwater were collected using low-flow method. Some wells were dry and hence not sampled. CMT-04 was inaccessible and thus not sampled during the time of the sampling event. The samples collected were analyzed for VOCs and shipped to the Contract Laboratory Program (CLP) Laboratory. The samples collected during this event are summarized in Table 4 and illustrated in Figure 3. Field copies of groundwater low-flow datasheets are included in Attachment A, logbook notes are included in Attachment B, and field photographs are included in Attachment C. The laboratory results were reported in the RA Report, which was submitted in 2019.

3.4 GROUNDWATER SAMPLING EVENT – MAY 2018

A ground water event was conducted from 21 through 24 May 2018. EA collected a total of 15 groundwater samples (including QC samples). Groundwater were collected using low-flow method and a bailer when necessary. The samples were analyzed for VOCs and Metals and shipped to the EPA Region 6 Laboratory and the CLP Laboratory respectively. Additionally, MNA parameters were collected and shipped to Eurofins. The samples collected during this event are summarized in Table 2 and illustrated in Figure 2. Latest gauging information data are shown in Table 1. Field copies of groundwater low-flow datasheets are included in Attachment A, logbook notes are included in Attachment B, and field photographs are included in Attachment C. The laboratory results were reported in the RA Report, which was submitted in 2019.

3.5 GROUNDWATER SAMPLING EVENT – NOVEMBER 2018

A ground water event was conducted from 5 through 7 November 2018. EA collected a total of 15 groundwater samples (including QC samples). Groundwater were collected using low-flow method and a bailer when necessary. The samples were analyzed for VOCs and Metals and shipped to the EPA Region 6 Laboratory and the CLP Laboratory respectively. Additionally, MNA parameters were collected and shipped to Eurofins. The samples collected during this event are summarized in Table 2 and illustrated in Figure 2. Latest gauging information data are shown in Table 1. Field copies of groundwater low-flow datasheets are included in Attachment A, logbook notes are included in Attachment B, and field photographs are included

in Attachment C. The laboratory results were reported in the RA Report, which was submitted in 2019.

3.6 VAPOR INTRUSION EVENT – NOVEMBER 2018

A vapor intrusion event was conducted on 6 November 2018 EA collected a total of 9 soil gas samples (including QC samples). Air samples were collected using laboratory supplied Summa canisters. The samples were analyzed for VOCs using method TO-15 SIM or TO-15 Low Level and were shipped to the EPA Region 6 Laboratory. The samples collected during this event are summarized in Table 3 and illustrated in Figure 3. Field copies of VI datasheets are included in Attachment A, logbook notes are included in Attachment B, and field photographs are included in Attachment C. The laboratory results are included in Attachment D.

3.7 WELL MAINTENANCE – MAY 2019

On 16 May 2019, EA performed well maintenance on CMT-04. The well is located on Tower Oaks Blvd and is down-gradient of the Jones Road Groundwater Plume Superfund Site. The asphalt was removed over CMT-04, and the area around the well head was cleaned. The new well pad was installed shortly thereafter. It is important to note that at the time of maintenance, road construction on Tower Oaks Blvd and around the CMT-04 well was also being performed, thus resulted in an increase in road elevation of 2-4 inches. Photos of the event can be found in the photolog in Attachment 3.

4. REFERENCES

EA Engineering, Science, and Technology, Inc., PBC (EA). 2011a. *Health and Safety Plan for Remedial Design Jones Road Ground Water Plume Superfund Site, Revision 00, Houston, Harris County, Texas*. March.

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U.S. Environmental Protection Agency (EPA). 2010. *Record of Decision, Jones Road Ground Water Plume Superfund Site, Harris County, Texas*. September.

———. 2020. *National Primary Drinking Water Regulations.* https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations. Accessed 24 March 2020.

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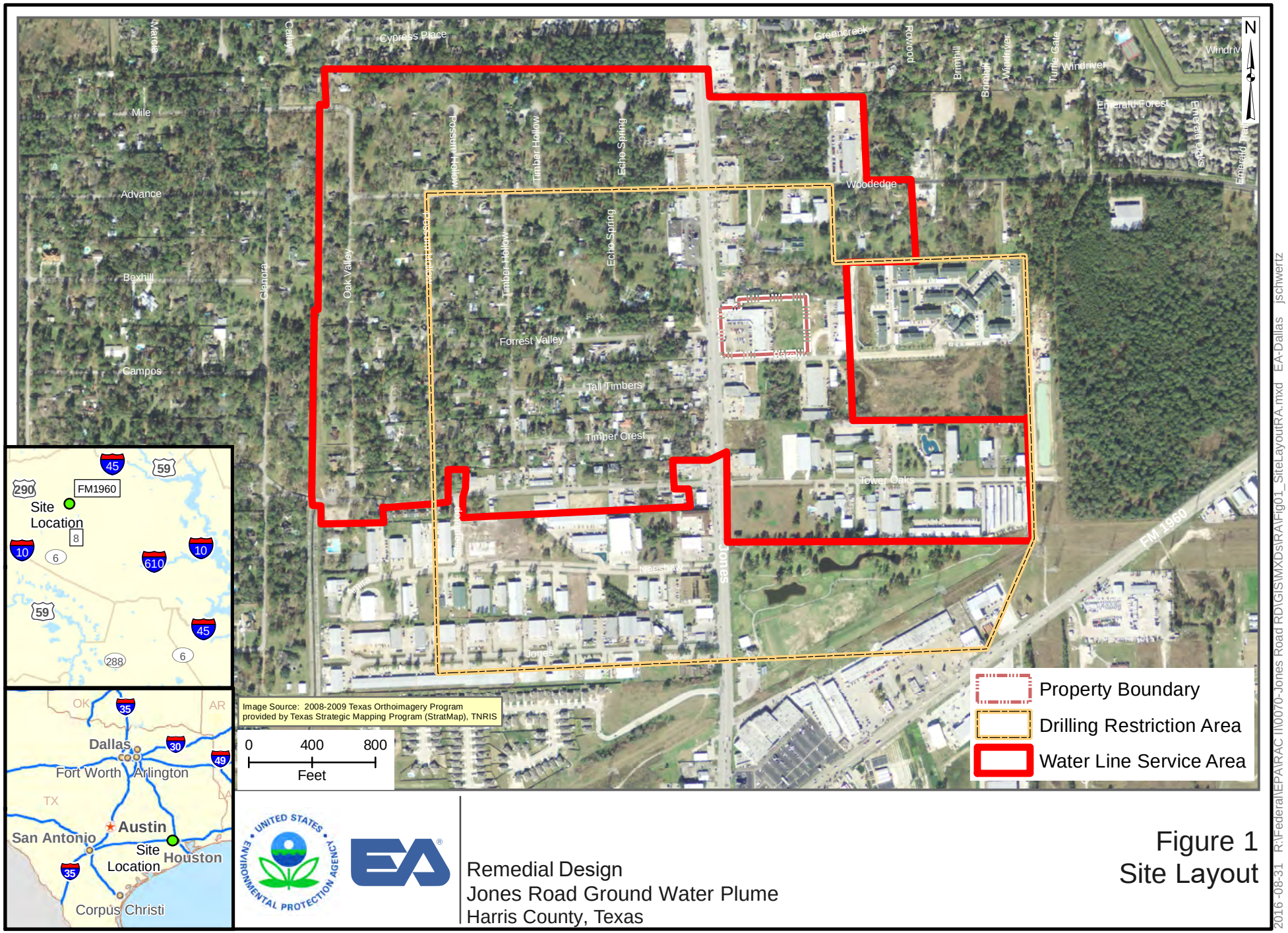
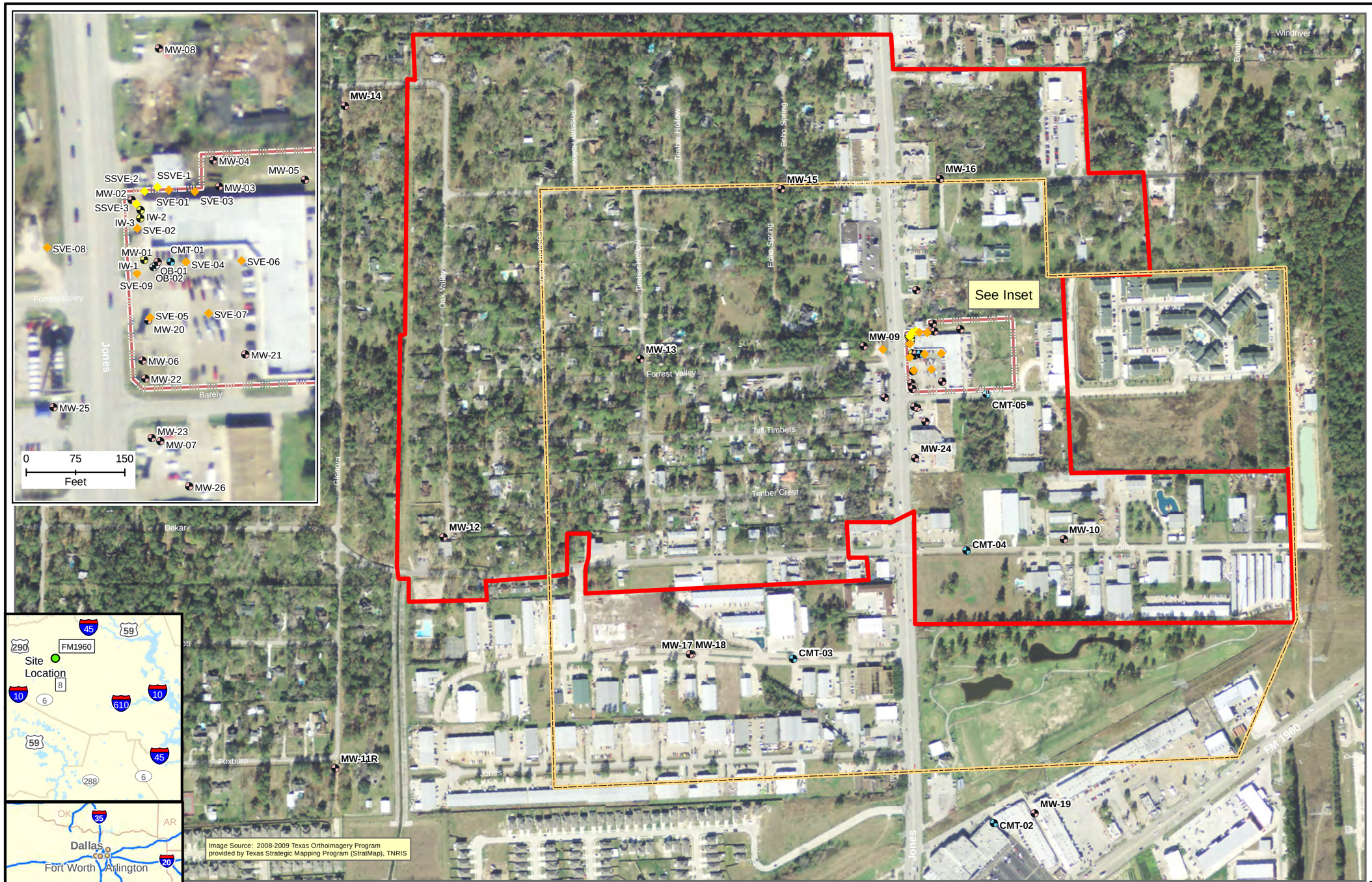
Figures



Remedial Design
Jones Road Ground Water Plume
Harris County, Texas

Figure 1
Site Layout

2016 -08-31 R:\Federal\EPA\RAC II\00\0-Jones Road RD\GIS\MXDs\RA\Fig01_SiteLayoutRA.mxd EA-Dallas jschwertz



Remedial Design
Jones Road Ground Water Plume
Harris County, Texas

Figure 2
Well Location Map

2016 -10-26 R:\Federal\EPA\RAC III\0070-Jones Road RD\GIS\MXDs\RIFS\Figxx_WellLocationMap.mxd EA-Dallas sglirein

Vapor Intrusion

- Indoor Air Sample Location
- Sub-slab Sample Location
- Background Air Sample Location

Note:
Locations are appoximate.

Remedial Design
ones Road Ground Water Plume
Harris County, Texas

Figure 3
Air Sample Location Map

2016 -05-20 R:\Federal\EPA\RAC II\007\0-Jones Road RD\GIS\MXDs\FRA\Fig02_VI sampleLoc.mxd EA-Dallas jschwertz

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Tables

Table 1 Monitoring Well Gauging Information

Monitoring Well ID	Date	Top of Casing Elevation (ft amsl)	Total Depth1 (ft bgs)	Screen Interval (ft bgs)	Depth To Water (ft btoc)	Ground Water Elevation (ft amsl)
MW-01	5/31/2017	124.08	35	2.5-35	25.02	99.06
MW-01	9/13/2017	124.08	35	2.5-35	22.93	101.15
MW-01	5/24/2018	124.08	35	2.5-35	24.24	99.84
MW-01	11/7/2018	124.08	35	2.5-35	21.35	103.05
MW-02	5/31/2017	124.40	35	2.5-35	23.17	101.23
MW-02	9/13/2017	124.40	35	2.5-35	20.60	103.80
MW-02	5/23/2018	124.40	35	2.5-35	21.65	102.75
MW-02	11/7/2018	124.40	35	2.5-35	18.20	106.20
MW-03	5/31/2017	123.83	35	2.5-35	22.26	101.57
MW-03	9/12/2017	123.83	35	2.5-35	19.23	104.60
MW-03	5/22/2018	123.83	35	2.5-35	20.80	103.03
MW-03	11/6/2018	123.83	35	2.5-35	16.43	107.40
MW-04	5/31/2017	124.18	35	2.0-35	21.98	102.20
MW-04	9/12/2017	124.18	35	2.0-35	19.05	105.13
MW-04	5/23/2018	124.18	35	2.0-35	21.10	103.08
MW-04	11/6/2018	124.18	35	2.0-35	15.66	108.52
MW-05	5/31/2017	124.58	35	2.0-35	22.88	101.70
MW-05	9/13/2017	124.58	35	2.0-35	20.04	104.54
MW-05	5/21/2018	124.58	35	2.0-35	21.60	102.98
MW-05	11/5/2018	124.58	35	2.0-35	21.60	102.98
MW-06	5/31/2017	124.09	35	2.0-35	34.83	89.26
MW-06	9/11/2017	124.09	35	2.0-35	31.20	92.89
MW-06	5/22/2018	124.09	35	2.0-35	33.80	90.29
MW-06	11/6/2018	124.09	35	2.0-35	30.71	93.38
MW-07	5/31/2017	124.16	35	20-35	29.36	94.80
MW-07	9/11/2017	124.16	35	20-35	26.73	97.43
MW-07	5/22/2018	124.16	35	20-35	29.43	94.73
MW-07	11/5/2018	124.16	35	20-35	26.29	97.87
MW-08	5/31/2017	124.82	36.5	20.5-35.5	20.24	104.58
MW-08	9/13/2017	124.82	36.5	20.5-35.5	17.61	107.21
MW-08	5/24/2018	124.82	36.5	20.5-35.5	could not access well	n/a
MW-08	11/5/2018	124.82	36.5	20.5-35.5	could not access well	n/a
MW-09	5/31/2017	127.23	35	20-35	24.87	102.36
MW-09	9/12/2017	127.23	35	20-35	22.10	105.13
MW-09	5/24/2018	127.23	35	20-35	24.33	102.90
MW-09	11/5/2018	127.23	35	20-35	20.70	106.53
MW-20	5/31/2017	124.5	32	25-30	27.71	96.79
MW-20	9/13/2017	124.5	32	25-30	35.00	89.50
MW-20	5/23/2018	124.5	32	25-30	27.71	96.79
MW-20	11/6/2018	124.5	32	25-30	24.83	99.67
MW-21	5/31/2017	124.16	32	25-30	27.46	96.70
MW-21	9/13/2017	124.16	32	25-30	24.78	99.38
MW-21	5/23/2018	124.16	32	25-30	27.11	97.05
MW-21	11/7/2018	124.16	32	25-30	23.62	100.54
MW-22	5/31/2017	124.73	55	48-53	48.10	76.63
MW-22	9/12/2017	124.73	55	48-53	44.23	80.50
MW-22	5/22/2018	124.73	55	48-53	46.04	78.69
MW-22	11/6/2018	124.73	55	48-53	45.84	78.89
MW-23	5/31/2017	124.6	55	48-53	45.01	79.29
MW-23	9/12/2017	124.6	55	48-53	43.67	80.93
MW-23	5/21/2018	124.6	55	48-53	45.39	79.21
MW-23	11/5/2018	124.6	55	48-53	44.84	79.76

Table 1 Monitoring Well Gauging Information

Monitoring Well ID	Date	Top of Casing Elevation (ft amsl)	Total Depth1 (ft bgs)	Screen Interval (ft bgs)	Depth To Water (ft btoc)	Ground Water Elevation (ft amsl)
MW-24	5/31/2017	124.37	55	48-53	21.48	102.89
MW-24	9/12/2017	124.37	55	48-53	17.44	106.93
MW-24	5/22/2018	124.37	55	48-53	21.74	102.63
MW-24	11/6/2018	124.37	55	48-53	17.93	106.44
CMT-01-1	5/30/2017	--	296	123	110.60	--
CMT-01-1	5/17/2018	--	296	123	110.00	--
CMT-01-2	5/30/2017	--	296	140	127.50	--
CMT-01-2	5/17/2018	--	296	140	127.00	--
CMT-01-3	5/30/2017	--	296	165	128.70	--
CMT-01-3	5/17/2018	--	296	165	127.00	--
CMT-01-4	5/30/2017	--	296	185	128.70	--
CMT-01-4	5/17/2018	--	296	185	127.00	--
CMT-01-5	5/30/2017	--	296	215	139.40	--
CMT-01-5	5/17/2018	--	296	215	139.00	--
CMT-01-6	5/30/2017	--	296	245	122.40	--
CMT-01-6	5/18/2018	--	296	245	123.00	--
CMT-01-7	5/30/2017	--	296	290	140.40	--
CMT-01-7	5/18/2018	--	296	290	--	--
CMT-02-1	5/22/2017	123.20	300	170	132.00	-8.80
CMT-02-1	5/18/2018	123.20	300	170	130.50	-7.30
CMT-02-2	5/22/2017	123.20	300	182	131.00	-7.80
CMT-02-2	5/18/2018	123.20	300	182	130.00	-6.80
CMT-02-3	5/22/2017	123.20	300	222	144.50	-21.30
CMT-02-3	5/18/2018	123.20	300	222	143.00	-19.80
CMT-02-4	5/22/2017	123.20	300	240	145.00	-21.80
CMT-02-4	5/18/2018	123.20	300	240	144.00	-20.80
CMT-02-5	5/22/2017	123.20	300	264	145.20	-22.00
CMT-02-5	5/18/2018	123.20	300	264	144.00	-20.80
CMT-02-6	5/22/2017	123.20	300	282	145.40	-22.20
CMT-02-6	5/18/2018	123.20	300	282	144.50	-21.30
CMT-02-7	5/22/2017	123.20	300	296	145.30	-22.10
CMT-02-7	5/18/2018	123.20	300	296	144.00	-20.80
CMT-03-1	5/23/2017	123.68	300	136	120.00	3.68
CMT-03-1	5/14/2018	123.68	300	136	118.50	5.18
CMT-03-2	5/23/2017	123.68	300	189	130.80	-7.12
CMT-03-2	5/14/2018	123.68	300	189	128.50	-4.82
CMT-03-3	5/23/2017	123.68	300	223	143.50	-19.82
CMT-03-3	5/14/2018	123.68	300	223	141.00	-17.32
CMT-03-4	5/23/2017	123.68	300	243	142.00	-18.32
CMT-03-4	5/14/2018	123.68	300	243	142.00	-18.32
CMT-03-5	5/23/2017	123.68	300	254	141.00	-17.32
CMT-03-5	5/14/2018	123.68	300	254	--	--
CMT-03-6	5/23/2017	123.68	300	285	143.50	-19.82
CMT-03-6	5/14/2018	123.68	300	285	141.50	-17.82
CMT-03-7	5/23/2017	123.68	300	299	n/a	n/a
CMT-03-7	5/14/2018	123.68	300	299	142.00	-18.32
CMT-04-1	5/24/2017	123.76	300	145	129.80	-6.04
CMT-04-2	5/24/2017	123.76	300	173	128.00	-4.24
CMT-04-3	5/24/2017	123.76	300	187	128.00	-4.24
CMT-04-4	5/24/2017	123.76	300	224	141.50	-17.74
CMT-04-5	5/24/2017	123.76	300	254	141.00	-17.24
CMT-04-6	5/24/2017	123.76	300	282	142.00	-18.24

Table 1 Monitoring Well Gauging Information

Monitoring Well ID	Date	Top of Casing Elevation (ft amsl)	Total Depth1 (ft bgs)	Screen Interval (ft bgs)	Depth To Water (ft btoc)	Ground Water Elevation (ft amsl)
CMT-04-7	5/24/2017	123.76	300	295	142.50	-18.74
CMT-05-1	5/25/2017	124.61	300	138	128.80	-4.19
CMT-05-1	5/16/2018	124.61	300	138	127.00	-2.39
CMT-05-2	5/25/2017	124.61	300	150	128.70	-4.09
CMT-05-2	5/16/2018	124.61	300	150	127.00	-2.39
CMT-05-3	5/25/2017	124.61	300	180	129.00	-4.39
CMT-05-3	5/16/2018	124.61	300	180	127.00	-2.39
CMT-05-4	5/25/2017	124.61	300	223	140.50	-15.89
CMT-05-4	5/16/2018	124.61	300	223	--	--
CMT-05-5	5/25/2017	124.61	300	24	140.50	-15.89
CMT-05-5	5/16/2018	124.61	300	24	134.00	-9.39
CMT-05-6	5/25/2017	124.61	300	275	141.30	-16.69
CMT-05-6	5/16/2018	124.61	300	275	140.00	-15.39
CMT-05-7	5/25/2017	124.61	300	287	141.50	-16.89
CMT-05-7	5/16/2018	124.61	300	287	--	--

NOTE:
amsl = Above mean sea level.
bgs = Below ground surface.
ft = Feet/foot.
n/a = Not available.
*CMT depth to water measurements were recorded to the nearest 0.1' or to the nearest foot.

Table 2 Monitor Well Sampling Information

Monitoring Well ID	Date	Volatile Organic Compound Analysis	Inorganic Analysis (Including Mercury)	Monitored Natural Attenuation Parameters Analysis
MW-01	9/13/2017	X	X	X
	5/24/2018	X	X	X
	11/7/2018	X	X	X
MW-01-DUP	9/13/2017	X	X	X
	5/24/2018	X	X	X
	11/7/2018	X	X	X
MW-02	9/13/2017	X	X	X
	5/23/2018	X	X	X
	11/7/2018	X	X	X
MW-03	9/12/2017	X	X	X
	5/22/2018	X	X	X
	11/6/2018	X	X	X
MW-04	9/12/2017	X	X	X
	5/23/2018	X	X	X
	11/6/2018	X	X	X
MW-05	9/13/2017	X	X	X
	5/21/2018	X	X	X
	11/5/2018	X	X	X
MW-06	9/11/2017	X	X	X
	5/22/2018	X	X	X
	11/6/2018	X	X	X
MW-07	9/11/2017	X	X	X
	5/21/2018	X	X	X
	11/5/2018	X	X	X
MW-08	9/13/2017	X	X	X
MW-09	9/12/2017	X	X	X
	5/24/2018	X	X	X
	11/5/2018	X	X	X
MW-20	9/13/2017	X	X	X
	5/23/2018	X	X	X
	11/6/2018	X	X	X

Table 2 Monitor Well Sampling Information

Monitoring Well ID	Date	Volatile Organic Compound Analysis	Inorganic Analysis (Including Mercury)	Monitored Natural Attenuation Parameters Analysis
MW-21	9/13/2017	X	X	X
	5/23/2018	X	X	X
	11/7/2018	X	X	X
MW-21-DUP	11/7/2018	X	X	X
MW-22	9/12/2017	X	X	X
	5/22/2018	X	X	X
	11/6/2018	X	X	X
MW-22-DUP	9/12/2017	X	X	X
	5/22/2018	X	X	X
MW-23	9/12/2017	X	X	X
	5/21/2018	X	X	X
	11/5/2018	X	X	X
MW-24	9/12/2017	X	X	X
	5/22/2018	X	X	X
	11/6/2018	X	X	X

Table 3 Vapor Intrusion Sampling Information

Location	Sample ID	Date	TO-15
ASI-106	ASBKG-1-06052018	6/5/2018	X
	ASI-106-11062018	11/6/2018	X
ASBKG-2	ASBKG-2-06052018	6/5/2018	X
	ASBKG-2-11062018	11/6/2018	X
ASI-101	ASI-101-11062018	6/5/2018	X
	ASI-101-11062018	11/6/2018	X
ASI-101-DUP	ASI-101-DUP-06052018	6/5/2018	X
	ASI-101-DUP-11062018	11/6/2018	X
ASI-102	ASI-102-06052018	6/5/2018	X
	ASI-102-11062018	11/6/2018	X
ASI-103	ASI-103-06052018	6/5/2018	X
	ASI-103-11062018	11/6/2018	X
ASI-104	ASI-104-06052018	6/5/2018	X
	ASI-104-11062018	11/6/2018	X
ASI-105	ASI-105-06052018	6/5/2018	X
	ASI-105-11062018	11/6/2018	X
ASI-106	ASI-106-06052018	6/5/2018	X
	ASI-106-11062018	11/6/2018	X

Table 4 CMT Wells Sampling Information

Location ID	Sample ID	Date	Volatile Organic Compound Analysis
CMT-01	CMT-01-1	5/17/2018	X
	CMT-01-2	5/17/2018	X
	CMT-01-3	5/17/2018	X
	CMT-01-4	5/17/2018	X
	CMT-01-5	5/17/2018	X
	CMT-01-5-DUP	5/17/2018	X
	CMT-01-6	5/17/2018	X
CMT-02	CMT-02-1	5/15/2018	X
	CMT-02-2	5/15/2018	X
	CMT-02-3	5/15/2018	X
	CMT-02-4	5/15/2018	X
	CMT-02-5	5/15/2018	X
	CMT-02-6	5/15/2018	X
	CMT-02-6-DUP	5/15/2018	X
CMT-03	CMT-03-1	5/14/2018	X
	CMT-03-2	5/14/2018	X
	CMT-03-3	5/14/2018	X
	CMT-03-4	5/14/2018	X
	CMT-03-4-DUP	5/14/2018	X
	CMT-03-6	5/14/2018	X
CMT-05	CMT-05-1	5/16/2018	X
	CMT-05-2	5/16/2018	X
	CMT-05-3	5/16/2018	X
	CMT-05-4	5/16/2018	X
	CMT-05-5	5/16/2018	X
	CMT-05-6	5/16/2018	X

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Attachment 1

Field Forms

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet ____ of ____

Date: ~~4/13/17~~

Ground Water Sampling Data Sheet

Well ID: MW-1 Sample ID: MW-1 Sample Time: 1110

Casing diameter/type: 2" Well location: Front at Grocery Weather: Overcast 80°

Screened interval(s): 2.5-35 Sampling personnel: WG, AO

Total depth: 35' Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 22.93 Water level indicator: Geotech

Final depth to water (w/o pump): 25.78 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: ~28' Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	Temp (°C)	Conductivity (mS/cm) or (µS/cm)	DO (%)	DO (mg/L)	pH	ORP (mV)	Water Level (feet btoc)	Flow Rate (L/min) or (mL/min)	Turbidity (NTU)	Purge Volume (L) or (mL)	Additional Comments
1045	27.0	2852	9.8	0.75	6.68	-96.8	23.43	200	41.64		
1048	27.5	2793	3.8	0.30	6.46	-116.1	23.58	200	35.64		
1051	27.8	2784	3.7	0.28	6.44	-118.3	23.73	200	22.28		
1054	27.8	2783	3.5	0.27	6.47	-120.8	23.87	200	19.06		
1057	27.9	2772	3.2	0.25	6.50	-124.4	23.89	200	19.56		
1100	28.1	2756	2.9	0.23	6.51	-127.4	23.91	200	20.55		
										3/4 gal	

Recorded By: W. Gaither

2/13/2017

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 9/13/17

Ground Water Sampling Data Sheet

Well ID: MW-02 Sample ID: MW-02 Sample Time: 1010

Casing diameter/type: Well location: Behind Market Weather: Cool Overcast 79°
Screened interval(s): 2.5-35' Sampling personnel: WG, AD
Total depth: 35 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 20.60 Water level indicator: Geotech
Final depth to water (w/o pump): 22.10 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: ~27.0' Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	Temp (°C)	Conductivity (mS/cm) or (µS/cm)	DO (%)	DO (mg/L)	pH	ORP (mV)	Water Level (feet btoc)	Flow Rate (L/min) or (mL/min)	Turbidity (NTU)	Purge Volume (L) or (mL)	Additional Comments
0945	24.8	1207	16.4	1.03	7.15	-28.6	21.61	200	30.02		
0948	25.1	1206	4.6	0.37	6.88	-68.0	21.49	200	22.79		
0951	25.4	1206	3.8	0.31	6.88	-83.8	21.47	200	21.78		
0954	25.6	1211	3.8	0.31	6.88	-90.2	21.42	200	19.83		
0957	25.8	1214	3.6	0.29	6.88	-96.4	21.41	200	19.33		
1000	26.0	1218	3.3	0.27	6.89	-99.9	21.41	200	14.78		
										~~0.5gal~~ 3.5gal	

Recorded By: W. Gantes

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet ____ of ____
Date: 9/12/17

Ground Water Sampling Data Sheet

Well ID: Mw-3 Sample ID: Mw-3 Sample Time: 1315

Casing diameter/type: 2" Well location: Behind Mahony Weather: Clear 86°
Screened interval(s): 2.5'-35' Sampling personnel: WF, AB
Total depth: 35' Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): wp ~~27.30~~ 19.23 Water level indicator: Geotech
Final depth to water (w/o pump): 19.41 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: wp ~~1886'~~ ~27.5 Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1255	24.5	1119	12.4	0.95	7.34	82.7	19.90	250	57.21		
1258	24.1	1111	4.1	0.34	6.44	98.9	19.93	250	48.56		
1301	24.6	1106	3.5	0.30	6.48	90.7	19.50	200	40.82		
1304	25.2	1108	3.8	0.31	6.63	79.8	19.52	200	39.00		
1307	24.4	1106	3.8	0.31	6.67	71.6	19.49	200	40.76		
1310	25.2	1103	3.5	0.29	6.67	69.0	19.50	200	32.12		
										3/4 gal	

Recorded By: W. Ganter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 9/12/17

Ground Water Sampling Data Sheet

Well ID: MW-4 Sample ID: MW-4 Sample Time: 1430

Casing diameter/type: 2" Well location: Behind Melony Weather: Clear 87°
Screened interval(s): 2-35 Sampling personnel: WG, AB
Total depth: 35 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 19.05 Water level indicator: Geotech
Final depth to water (w/o pump): 21.33 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 28' Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1410	23.5	1585	75.2	6.08	6.96	-25.4	20.15	250	37.49		
1413	23.5	1578	5.2	0.43	6.28	-29.6	20.33	250	40.26		Water has strong
1416	23.8	1581	3.2	0.27	6.31	-45.3	20.50	250	29.34		odor. Bio?
1419	23.9	1587	2.1	0.18	6.41	-63.5	20.52	250	23.4		
1422	23.9	1588	1.9	0.15	6.45	-72.2	20.67	250	21.77		
1425	23.9	1586	1.7	0.14	6.46	-79.6	20.70	250	19.43		
										3/4 gal	

Recorded By: W. Gamter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 9/13/17

Ground Water Sampling Data Sheet

Well ID: Mw-5 Sample ID: Mw-5 Sample Time: 1615

Casing diameter/type: 2" Well location: Behind Mahony Weather: Overcast 80°
Screened interval(s): 2-35 Sampling personnel: WG, AO
Total depth: 35 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 20.04 Water level indicator: Geotech
Final depth to water (w/o pump): 20.95 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: ~28.0 Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1550	24.4	1997	13.4	1.08	6.84	79.8	20.56	200	~~64~~ 64.53		
1553	23.7	1937	9.6	0.81	6.29	93.0	20.80	200	58.34		
1556	24.1	1915	10.9	0.91	6.31	89.7	20.82	200	810 ou		
1559	24.1	1911	11.1	0.93	6.34	88.2	20.82	200	136 ou		
1602	24.1	1916	11.4	0.96	6.41	85.6	20.85	200	92.95		
1605	24.1	1936	10.5	0.88	6.44	83.7	20.85	200	79.12		
										3/4 gal	

Recorded By: W. Gunter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet ____ of ____
Date: 9/11/17

Ground Water Sampling Data Sheet

Well ID: MW-06 Sample ID: MW-06 Sample Time: 1645

Casing diameter/type: 2" Well location: Weather: Warm clear 85°

Screened interval(s): 2-35 Sampling personnel: WG, AB

Total depth: 35 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 31.2 Water level indicator: Geotech

Final depth to water (w/o pump): 33.7 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: Pump type/model: /

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
		Hand									
		Dip									

Recorded By: W. Gunter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet ____ of ____
Date: 9/11/17

Ground Water Sampling Data Sheet

Well ID: Mw-7 Sample ID: Mw-7 Sample Time: 1315

Casing diameter/type: 2" Well location: Weather: Warm Clear 85°

Screened interval(s): 20-35 Sampling personnel: WG, AB

Total depth: 35' Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 26.73 Water level indicator: Geotech

Final depth to water (w/o pump): 27.13 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: 32' Pump type/model: ~~SS Monsoon~~ WG

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
		Hand Dail									
											Collected FB/ER

Recorded By: WG

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 9/13/17

Ground Water Sampling Data Sheet

Well ID: MW-8 Sample ID: MW-8 Sample Time: 0815

Casing diameter/type: 2" Well location: Lumber Yard Weather: Cool, Overcast 73°
Screened interval(s): 20-35.5 Sampling personnel: WO, AB
Total depth: 36.5 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 17.61 Water level indicator: Geotech
Final depth to water (w/o pump): 17.81 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 26 Pump type/model: SS monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
755	23.5	1458	15.4	1.24	6.69	106.0	17.95	200	71.44		
758	24.0	1458	4.2	0.35	6.83	91.3	17.87	200	60.29		
801	24.1	1458	4.1	0.34	6.84	87.8	17.83	200	48.93		
804	24.3	1459	3.7	0.31	6.84	86.5	17.83	200	42.86		
807	24.3	1459	4.5	0.37	6.82	87.1	17.82	200	40.44		
										~~0.5 gal~~ 3 gal	

Recorded By: W. Ganter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet ____ of ____
Date: 9/13/17

Ground Water Sampling Data Sheet

Well ID: MW-20 Sample ID: MW-20 Sample Time: 1345

Casing diameter/type: 2" Well location: Parking Lot, Cypress Centre Weather: Overcast 88°

Screened interval(s): 20-32.5 Sampling personnel: WG, AB

Total depth: ~~32'~~ 35.0 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 25.58 Water level indicator: Geotech

Final depth to water (w/o pump): Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: 29' Pump type/model: SS Monsoo

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1325	28.2	2938	12.0	0.91	6.53	-60.8	26.23	200	1300 av		Water level is
1328	29.0	2966	3.1	0.24	6.17	-55.0	26.04	200	1509 av		very low. Pump wont
1331	29.3	2970	2.7	0.21	6.21	-60.6	26.05	200	733 av		go past 30'
1334	29.3	2975	2.7	0.21	6.26	-64.7	26.05	200	626 av		
1337	29.3	2984	2.6	0.19	6.32	-69.4	26.09	200	~~86 av~~ 107	27.2	
1340	29.2	2989	2.2	0.17	6.34	-70.2	26.13	200	68.24		
										3¼ gal	

Recorded By: W. Ganter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____

Date: 9/12/17

Ground Water Sampling Data Sheet

Well ID: MW-9 Sample ID: MW-9 Sample Time: 1800

Casing diameter/type: 2" Well location: Firework Shack Weather: Clear 80°

Screened interval(s): 20-35 Sampling personnel: WG, MB

Total depth: 35' Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 22.1 Water level indicator: Geotech

Final depth to water (w/o pump): 24.95 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: 27 Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1738	24.6	1734	14.9	1.20	6.59	17.9	21.83	200	80.63		
1741	24.9	1722	12.5	1.01	6.38	22.7	23.34	200	156.0		
1744	26.1	1714	10.0	0.80	6.39	14.5	23.30	200	145.0		
1747	26.4	1721	8.8	0.70	6.43	-1.9	23.29	200	86.0		
1750	27.0	1705	7.7	0.61	6.63	-11.0	23.32	200	71.8		
1753	27.2	1688	7.2	0.57	6.65	-15.0	23.31	200	46.0		
1756	27.5	1674	6.8	0.53	6.66	-18.2	23.30	200	92.41		
1759										7 1/4 WG 3gal	

Recorded By: W. Canter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 9/13/17

Ground Water Sampling Data Sheet

Well ID: MW-21 Sample ID: MW-21 Sample Time: 1515

Casing diameter/type: 2" Well location: Pet Grooming Pkng Lot Weather: Overcast Breezy 89°
Screened interval(s): Sampling personnel: WG, AG
Total depth: 29.73 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 24.78 Water level indicator: Geotech
Final depth to water (w/o pump): 25.01 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 27' Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1453	27.3	1992	32.7	2.44	6.39	26.5	25.07	200	49.75		
1456	28.1	1973	4.4	0.34	6.23	29.6	25.03	200	39.90		
1459	28.4	1877	3.7	0.28	6.27	30.9	25.03	200	33.10		
1502	28.5	1853	3.3	0.25	6.30	30.9	25.03	200	25.44		
1505	28.6	1836	2.7	0.21	6.37	30.6	25.05	200	19.24		
1508	28.6	1837	2.5	0.19	6.34	30.1	25.06	200	12.28	3 gal	

Recorded By: W. Ganter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 2/12/17

Ground Water Sampling Data Sheet

Well ID: Mw-22 Sample ID: Mw-22 Sample Time: 1120

Casing diameter/type: 2" Well location: Cypress Centre Weather: Clear 82°
Screened interval(s): 48-53 Sampling personnel: WG, AB
Total depth: 55 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 44.23 Water level indicator: Geotech
Final depth to water (w/o pump): 45.87 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 51' Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	Temp (°C)	Conductivity (mS/cm) or (µS/cm)	DO (%)	DO (mg/L)	pH	ORP (mV)	Water Level (feet btoc)	Flow Rate (L/min) or (mL/min)	Turbidity (NTU)	Purge Volume (L) or (mL)	Additional Comments
1100	25.9	2927	34.1	2.34	6.49	26.5	45.27	200	18.00		
1103	25.8	2941	8.1	0.64	6.24	9.7	45.05	200	91.0		
1106	25.8	2848	4.9	0.39	6.21	-0.5	44.96	200	~~613.0~~ W/D	136	
1109	26.1	2807	4.1	0.33	6.25	-6.8	44.98	220	97		
1112	26.3	2792	3.9	0.31	6.34	-15.7	44.96	200	38.0		
1115	26.6	2787	3.5	0.28	6.38	-20.8	44.96	200	76.71		
										~ 3 gal	

Recorded By: W. Gantes

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 9/12/17

Ground Water Sampling Data Sheet

Well ID: Mw-23 Sample ID: Mw-23 Sample Time: 0950

Casing diameter/type: 2" Well location: Weather: Clear 80°
Screened interval(s): 48-53 Sampling personnel: WG AB
Total depth: 55 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 43.67 Water level indicator: Geotech
Final depth to water (w/o pump): 45.21 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 51' Pump type/model: Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
0935	27.2	1167	22.4	1.75	7.12	57.8	46.25	300	60.08		
0938	25.1	1168	12.5	1.02	7.08	49.0	46.27	250	54.35		
0941	25.4	1173	10.9	0.88	7.05	43.2	46.41	250	85.53		
0944	25.6	1109	8.3	0.67	7.05	34.6	45.91	250	147.0		
0947	26.0	1194	8.7	0.70	7.04	28.5	45.51	250	678.0		
										3 gal	

Recorded By: W. Gaston

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet ____ of ____
Date: 9/12/17

Ground Water Sampling Data Sheet

Well ID: MW-24 Sample ID: MW-24 Sample Time: 0855

Casing diameter/type: 2" Well location: O'Reilly's Weather: Clear 79°

Screened interval(s): 48-53 Sampling personnel: WG, AB

Total depth: 55 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 17.44 Water level indicator: Geotech

Final depth to water (w/o pump): 31.98 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: 51' Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	Temp (°C)	Conductivity (mS/cm) or (µS/cm)	DO (%)	DO (mg/L)	pH	ORP (mV)	Water Level (feet btoc)	Flow Rate (L/min) or (mL/min)	Turbidity (NTU)	Purge Volume (L) or (mL)	Additional Comments
825	25.2	1051	9.1	0.65	7.39	13.7	21.76	200	41.61		
828	25.5	1030	6.2	0.50	7.32	4.9	23.45	200	36.24		
831	25.8	1034	6.2	0.50	7.30	0.1	24.09	250	34.87		
834	25.8	1026	5.6	0.45	7.30	-1.8	24.44	250	34.53		
837	26.1	1017	5.7	0.46	7.30	-2.6	25.77	200	31.85		
840	26.1	1009	5.2	0.40	7.30	-1.1	26.60	250	30.21		
843	26.1	989	6.8	0.55	7.31	2.3	27.3	250	30.43		
846	26.1	1001	6.8	0.57	7.30	2.1	27.97	250	30.32		
849	26.1	1003	5.4	0.48	7.30	-1.8	28.60	250	29.8		
852	25.8	933	9.6	0.59	7.32	10.0	29.7	250	27.2		
										4 gal	

Recorded By: W Gunter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet ____ of ____
Date: 9/11/17

Ground Water Sampling Data Sheet

Well ID: MW-25 Sample ID: / Sample Time: /

Casing diameter/type: 2" Well location: Weather: Clear 85°

Screened interval(s): 23-28 Sampling personnel: WG AB

Total depth: 30 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 29.53 Water level indicator:

Final depth to water (w/o pump): 29.53 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: Pump type/model:

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	Temp (°C)	Conductivity (mS/cm) or (µS/cm)	DO (%)	DO (mg/L)	pH	ORP (mV)	Water Level (feet btoc)	Flow Rate (L/min) or (mL/min)	Turbidity (NTU)	Purge Volume (L) or (mL)	Additional Comments
											No Water
											No Sample

Recorded By: WG

Jones Road Ground Water Plume, Harris County, Texas

Sheet _____ of _____

Date: 5/17/18

Ground Water Sampling Data Sheet

Well ID: CMT-01 Sample ID: Sample Time:

Casing diameter/type: 3/8" CMT Channel | Well location: | Weather: 500° Sunny Humid

Screened interval(s): | Sampling personnel: WG/JB

Total depth: | Sampling method: CMT

Initial depth to water (w/o pump): | Water level indicator: Solinst

Final depth to water (w/o pump): | Water quality meter: YSI

Measuring point: **North side of casing** | Pump depth setting: | Pump type/model:

3-5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min	< 10 NTU	< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	Temp (°C)	Conductivity (mS/cm) or (µS/cm)	DO (%)	DO (mg/L)	pH	ORP (mV)	Water Level (feet btoc)	Flow Rate (L/min) or (mL/min)	Turbidity (NTU)	Purge Volume (L) or (mL)	Additional Comments
~~0825~~	~~25.7~~	~~662.1~~			~~6.97~~	~~195.0~~			~~67.5~~		CMT-01-7 Collapsed (72.5)
~~830~~											Idw X
825	25.7	684.2			7.08	133.0			17.3		CMT-01-6 (0840) + Msmsd
830	25.7	662.1			6.97	195.0			67.5		Idw 123.0 F: 123.5
0900	26.9	665.3			7.29	162.0			14.4		CMT-01-5 (0915) + Dooc
0905	26.4	596.8			8.00	158.0			21.2		Idw 139.0 F: 139.0
0930	27.0	462.4			8.14	149.0			4.44		CMT-01-4 (0940) 2.75 Vacs
0935	27.0	466.3			8.12	153.0			33.5		Idw 127.0 F: 127.5
1000	27.9	613.4			8.14	143.0			9.05		CMT-01-3 (1015)
1010	27.6	569.8			8.06	109			21.8		Idw 127.0 F 127'
1030	28.7	512.2			7.89	121			8.66		CMT-01-2 (1040)
1035	28.6	528.7			7.96	115			788.0		Idw - 127.0 F 127'
1100	29.3	375.9			8.02	135			OVR		CMT-01-1 (1110)
1105	29.5	357.7			7.78	147			403.0		Idw - 110.0 F 111.0

Recorded By: W. Carter

5/2/2018

Jones Road Ground Water Plume, Harris County, Texas

Sheet _____ of _____

Date: 5/15/18

Ground Water Sampling Data Sheet

Well ID: CMT-02 Sample ID: Sample Time:

Casing diameter/type: 3/8" CMT Channel | Well location: | Weather: Hot 100°

Screened interval(s): | Sampling personnel: WG/JB

Total depth: | Sampling method: CMT

Initial depth to water (w/o pump): | Water level indicator: Solinst

Final depth to water (w/o pump): | Water quality meter: YSI

Measuring point: **North side of casing** | Pump depth setting: | Pump type/model:

3-5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min	< 10 NTU	< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
—	—	—			Cont	Reach Valve			—		CMT-02-7 Sample X Collapse
—	—	—			—	—			—		Idw: 144.0 F 144.0
1005	29.4	752.2			7.23	-77.0			100.9		CMT-02-6 Sample (1015)
1010	29.1	750.7			7.12	-89.0			23.5		Idw: 144.5 F 144.5
1030	29.0	746.8			7.50	-72.0			11.06		CMT-02-5 Sample (1045)
1035	28.1	770.1			7.31	-96.0			5.97		Idw: 144.0 F 144.0
1120	31.1	766.5			99.57	-86			18.7		CMT-02-4 Sample (1130)
1125	30.8	766.2			7.24	-88			3.64		Idw: 144.0 F 144.5
1140	29.9	769.0			7.41	-610			51.7		CMT-02-3 Sample (1150)
1145	29.8	769.5			7.15	-72.0			5.92		Idw: 143.0 F 143.0
1205	30.6	780.4			7.12	-81.0			63.9		CMT-02-2 Sample (1215)
1210	30.3	781.1			7.05	-70.4			-13.0		Idw: 130.0 F 130.5
1240	31.5	762.3			7.18	-89.0			720AV		CMT-02-1 Sample (1250)
1245	31.7	759.0			7.03	-83.0			740AV		Idw: 130.5 F 131.0

Recorded By: W. Gantor

Jones Road Ground Water Plume, Harris County, Texas

Sheet _____ of _____
Date: 5/14/18

Ground Water Sampling Data Sheet

Well ID: CMT-3 Sample ID: Sample Time:

Casing diameter/type: 3/8" CMT Channel
Well location:
Weather: Hot 100°
Screened interval(s):
Sampling personnel: WG/DB
Total depth:
Sampling method: CMT
Initial depth to water (w/o pump):
Water level indicator: Solinst
Final depth to water (w/o pump):
Water quality meter: YSI
Measuring point: **North side of casing**
Pump depth setting:
Pump type/model:

3-5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min	< 10 NTU	< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1255	30.1	1075	No Sample	/	7.73	41.0	/	/	OL	/	CMT-3-1 Sample ~~1315~~ 1700 2nd try
1310	31.5	1230	/	/	8.25	43.0	/	/	OL	/	Idw - 118.5 F: Dry Not enough water
1330	28.8	839.4	/	/	8.02	-56.0	/	/	65.8	/	CMT-3-2 Sample 1340
1335	28.5	850.1	/	/	8.33	-13.0	/	/	65.1	/	Idw - 128.5 F 134.5
1350	30.6	979.7	/	/	7.74	-70.0	/	/	11.3	/	CMT-3-3 Sample 1400
1355	28.8	771.0	/	/	7.51	-116.0	/	/	6.32	/	Idw - 140.0 F: 146.5
1505	31.2	791.7	/	/	7.57	-104	/	/	8.16	/	CMT-3-4 Sample 1515 Dupe
1510	30.5	703.2	/	/	7.43	-103	/	/	9.02	/	Id - 142.0 F: 143
–	–	–	–	–	–	–	–	Blocked	@ 115'	–	CMT-3-5 Sample X
–	–	–	–	–	–	–	–	–	–	–	X
1540	31.0	740.0	/	/	7.85	-75.0	/	/	4.35	/	CMT-3-6 Sample 1600 only 2 vars
1550	Dry	Dry	/	/	2dry	Dry	/	/	dry	/	Idw 141.5 F 143.75
		7									CMT-3-7 Sample: Blockage
			is plugged w/ 20/40 fill sand.								Idw - 142.0 F: 142.0

Recorded By: WG

5/2/2018

Jones Road Ground Water Plume, Harris County, Texas

Sheet _____ of _____

Date: 5/16/18

Ground Water Sampling Data Sheet

Well ID: CMT-05 Sample ID: Sample Time:

Casing diameter/type: 3/8" CMT Channel | Well location: | Weather: 1000° Humid, Sun

Screened interval(s): | Sampling personnel: WG / TB

Total depth: | Sampling method: CMT

Initial depth to water (w/o pump): | Water level indicator: Solinst

Final depth to water (w/o pump): | Water quality meter: YSI

Measuring point: **North side of casing** | Pump depth setting: | Pump type/model:

3-5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min	< 10 NTU	< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
					Obstruction 49'						CMT-05-7 X
											Idw: Obstruction 49'
0915	25.2	563.2			7.66	170			0		CMT-05-6 Sample (0925)
0920	25.7	701.1			7.78	105			1227AV		Idw: 140.0 F 140'
wp 0950 ~~0925~~	25.3	682.3			6.86	-5.0			47.5		CMT-05-5 Sample (1000)
0955wp ~~0940~~	25.2	717.3			7.20	-79.0			24.8		Idw: 139.0 F 140
1025 ~~0955wp~~	26.2	691.1			7.24	-75.0			19.9		CMT-05-4 Sample (1035)
1030	26.0	690.5			7.21	-67.0			9.79		Idw: Ø Probe wont go down 137
1045	26.4	720.3			6.90	-95			11.5		CMT-05-3 Sample (1110)
1100	26.5	728.7			6.93	-101.0			15.4		Idw: 127.0 F: 127
1115	27.5	801.0			7.20	-99.0			1318AV		CMT-05-2 Sample (1130)
1120	27.4	803.6			7.11	~~-84~~ -84			966 AV		Idw: 127.0 F: 127
1150	29.1	722.3			7.54	-130.0			-96.0		CMT-05-1 Sample (1200)
1155	27.2	~~643.0~~ 643.0			7.76	104			-86.0		Idw: 127.0 F 126.0

Recorded By: W. Gantzer

5/2/2018

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____

Date: 5/24/18

Ground Water Sampling Data Sheet

Well ID: MW-01 Sample ID: MW-01 Sample Time: 0830

Casing diameter/type: 2" Well location: Halal market front Weather: Cooler 80° Clear

Screened interval(s): 25-35 Sampling personnel: WG/JB

Total depth: 35 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 24.24 Water level indicator: Heron

Final depth to water (w/o pump): 25.72 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: 30 Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
0750	25.24	1.363	74.1	5.80	6.59	-166.4	350 → 25.62	25.62	27.5		
0755	25.54	1.368	19.0	1.54	6.56	-149.7	25.94 ✓	375	13.6		
0800	25.71	1.367	14.9	1.21	6.55	-146.3	26.34	400	10.88		
0805	25.83	1.364	12.3	0.99	6.54	-156.3	26.36	400	7.68		
0810	25.94	1.362	12.0	0.97	6.54	-158.3	26.59	350	6.50		
0815	26.01	1.362	13.4	1.08	6.54	-146.9	26.59	350	4.42		
0820	26.08	1.365	13.0	1.05	6.54	-141.3	26.64	350	3.67		

Recorded By: W. Gamble

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____

Date: 5/23/18

Ground Water Sampling Data Sheet

Well ID: MW-02 Sample ID: MW-02 Sample Time: 1340

Casing diameter/type: 2" Well location: Jones Rd. Weather: Rain 90°

Screened interval(s): 25-35 Sampling personnel: JB/UG

Total depth: 35 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 21.65 Water level indicator: Heron

Final depth to water (w/o pump): 23.86 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: 30 Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	Temp (°C)	Conductivity (mS/cm) or (µS/cm)	DO (%)	DO (mg/L)	pH	ORP (mV)	Water Level (feet btoc)	Flow Rate (L/min) or (mL/min)	Turbidity (NTU)	Purge Volume (L) or (mL)	Additional Comments
1305	23.88	1.042	396.5	31.18	6.83	-202.5	~~25.50~~ 25.05	~~375~~ 300	1034 av		
1310	23.88	1.040	47.6	3.72	6.79	-222.4	25.04	300	-32.0		
1315	24.10	1.037	18.6	1.54	6.79	-203.2	25.34	375	55.0		
1320	24.45	1.035	12.9	1.07	6.76	-200.8	25.54	375	34.5		
1325	24.58	1.033	12.1	1.01	6.76	-204.6	25.54	400	27.0		
1330	24.67	1.032	11.3	0.93	6.77	-192.7	25.56	375	22.3		

Recorded By: W. Gunter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 5/22/18

Ground Water Sampling Data Sheet

Well ID: MW-03 Sample ID: MW-03 Sample Time: 1140

Casing diameter/type: 2" Well location: Behind McLong Weather: 10000°F 100% Humidity Sunny Lightning moving in.

Screened interval(s): 25-35 Sampling personnel: WG/JB

Total depth: 35 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 20.80 Water level indicator: Heron

Final depth to water (w/o pump): 21.04 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: 30 Pump type/model:

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1110	23.54	0.537	206.3	12.94	6.89	38.5	21.34	300	71		
1115	23.21	0.531	45.8	3.75	6.58	42.9	21.39	350	112.0		
1120	23.36	0.532	34.4	2.92	6.64	40.5	21.41	350	95.2		
1125	23.41	0.533	30.6	2.57	6.71	39.2	21.44	350	82.3		
1130	23.22	0.535	24.9	2.12	6.72	43.5	21.47	350	44.5		
1135	23.20	0.536	20.2	1.71	6.73	42.5	21.48	350	32.3		

Recorded By: W. Gantz

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____

Date: 5/23/18

Ground Water Sampling Data Sheet

Well ID: MW-04 Sample ID: MW-04 Sample Time: 1100

Casing diameter/type: 2" Well location: Behind Mclaw Weather: Cloudy, stormy 90°

Screened interval(s): 25-35 Sampling personnel: WG/JB

Total depth: 35 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 21.10 Water level indicator: Heron

Final depth to water (w/o pump): 21.47 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: 30 Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1030	23.43	1.909	28.3	2.22	6.86	-241.3	22.47	400	-30		
1035	22.71	1.971	14.6	1.25	6.76	-232.3	22.60	300	49.4		
1040	22.59	1.976	11.2	0.96	6.76	-228.4	22.73	300	38.6		
1045	22.59	1.963	0.47 (11.2)	6.76	-197.6	22.86	300	31.6			
1050	22.60	1.930	11.1	0.95	6.75	-202.4	22.92	325	20.8		
1055	22.58	1.836	16.1	0.95	6.73	-201.5	23.01	325	16.2		

Recorded By: W. Gantar

5/18/2018

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 5/21/18

Ground Water Sampling Data Sheet

Well ID: MW-05 Sample ID: MW-05 Sample Time: 1430

Casing diameter/type: 2" Well location: Behind MeZone Weather: 90 - 100° F
Screened interval(s): 25.5 - 35.90 Sampling personnel: LG/JB
Total depth: 35.5 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 21.60 Water level indicator: Heron
Final depth to water (w/o pump): 22.34 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 30 Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1400	24.39	1.300	65.3	5.29	6.54	48.7	22.08	300	1677 av		Water is orange from
1405	23.19	1.327	27.9	2.36	6.42	23.5	22.07	250	1920 av		injection
1410	23.63	1.325	18.5	1.56	6.45	2.1	22.10	300	1511 av		
1415	23.75	1.319	15.9	1.33	6.47	-4.5	22.14	300	1177 av		
1420	23.85	1.313	14.1	1.18	6.47	-9.0	22.06	250	775 av		
1425	23.98	1.309	12.7	1.07	6.47	-10.8	22.11	350	699 av		

Recorded By: W. Gonter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 5/22/18

Ground Water Sampling Data Sheet

Well ID: MW-6 Sample ID: MW-6 Sample Time: 0920

Casing diameter/type: 2" Well location: Weather:

Screened interval(s): Sampling personnel:

Total depth: Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 33.80 Water level indicator:

Final depth to water (w/o pump): Dry Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: Pump type/model:

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
			Bailed								

W. Gantt

Recorded By: _____

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: _____

Ground Water Sampling Data Sheet

Well ID: MW-7 Sample ID: MW-7 Sample Time: 1300

Casing diameter/type: 2" Well location: BFE Rock Club Parking Lot Weather: PC/HOT -90'F

Screened interval(s): 20-35 Sampling personnel: WB/JTB

Total depth: 35 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 29.43 Water level indicator: Heron

Final depth to water (w/o pump): 29.71 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
			Bail								

Recorded By: _____

5/18/2018

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 5/24/18

Ground Water Sampling Data Sheet

Well ID: MW-08 Sample ID: / Sample Time:

Casing diameter/type: 2" Well location: Weather:

Screened interval(s): Sampling personnel:

Total depth: Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): Water level indicator:

Final depth to water (w/o pump): Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: Pump type/model:

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
											- Well is under large woodpile - inaccessible

Recorded By:_____

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____

Date: 5/24/18

Ground Water Sampling Data Sheet

Well ID: MW-09 Sample ID: MW-09 Sample Time: 1000

Casing diameter/type: 2" Well location: Ace Hardware Lot Weather: Clear, Breeze 82°

Screened interval(s): 20-35 Sampling personnel: WG / JB

Total depth: 35' Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 24.33 Water level indicator: Heron

Final depth to water (w/o pump): 25.36 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
0920	23.84	1.071	24.7	1.98	6.68	-13.1	25.71	200	120.0		
0925	23.68	1.065	18.0	1.52	6.51	10.6	25.18	300	106.4		
0930	23.64	1.058	14.4	1.21	6.53	10.3	~~25.25~~ 25.23	250	124.0		
0935	23.86	1.056	11.6	0.97	6.56	8.2	25.29	300	125.0		
0940	24.04	1.048	10.0	0.83	6.59	-7.8	25.31	225	94.3		
0945	24.06	1.045	9.2	0.77	6.58	7.7	25.39	300	84.7		
0950	24.14	1.042	7.1	0.60	6.59	9.0	25.46	300	56.0		

Recorded By: W. Gamter

5/18/2018

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____

Date: 5/23/18

Ground Water Sampling Data Sheet + 1100 5/24/18 MNA

Well ID: MW-20 Sample ID: MW-20 Sample Time: 0940

Casing diameter/type: 2" Well location: Parking lot Weather:

Screened interval(s): 20-32.5 Sampling personnel: WG/JB

Total depth: 29.63 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 27.71 Water level indicator: Heron

Final depth to water (w/o pump): 29.03 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: Pump type/model:

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
				Bailer							Water level too low to pump will bail for sample
				EPA =		5/23/18	0940				After collecting VOCs, water turns to mud. Collect DM for epa due to filter clog & filters in the process due to mud. 2in of water in bailer with each recovery all mud. Private lab MNA will not be collected.
				Private		= 5/24/18	1100				

Recorded By: W. Gunter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____

Date: 5/23/18

Ground Water Sampling Data Sheet

Well ID: MW-21 Sample ID: MW-21 Sample Time: 0830

Casing diameter/type: 2" Well location: Site Parking lot Weather: Hot, humid, Sun 90°

Screened interval(s): Sampling personnel: WG/JB

Total depth: 24.73 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 27.11 Water level indicator: Heron

Final depth to water (w/o pump): 27.50 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
0805	25.06	1.042	55.6	4.42	6.67	-41.6	29.68	300	OL		Well not recharging
0810	25.34	1.017	21.5	1.75	6.61	-60.3	28.62	350	2716cu		Pull pump and bail for sample
				Bail							

Recorded By: W. Granter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____

Date: 5/22/18

Ground Water Sampling Data Sheet

Well ID: MW-22 Sample ID: MW-22 Sample Time: 0945

Casing diameter/type: 2" Well location: S/E Parking Lot Weather: Clear, Hot 90°

Screened interval(s): 48-53 Sampling personnel: WG/JB

Total depth: 55 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 46.04 Water level indicator: Heron

Final depth to water (w/o pump): 47.06 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: Pump type/model:

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
				Bailer							

W. Gamler

Recorded By: _____

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 5/21/18

Ground Water Sampling Data Sheet

Well ID: MW-23 Sample ID: MW-23 Sample Time: 1230

Casing diameter/type: 2" Well location: BFE Rock Club Parking Lot Weather: PC/Hot 90°F w/ 1000% Humidity

Screened interval(s): 48-53 Sampling personnel: WG/JTB - The CMT Cowboys

Total depth: 55 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 45.39 Water level indicator: Heron

Final depth to water (w/o pump): 46.13 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: 50' Pump type/model: SS Mega-Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1200	26.52	0.762	120.1	9.23	8.83	71.1	47.72	300	17.1		
1205	26.04	0.664	44.5	3.56	6.63	38.0	47.73	250	29.0		
1210	26.59	0.655	30.1	2.37	6.74	26.0	47.68	250	117.0		
1215	27.46	0.670	18.5	1.45	6.78	14.4	47.44	200	131.0		
1220	27.79	0.682	11.4	0.89	6.78	-7.3	47.26	300	124.0		
1225	27.73	0.686	9.7	0.76	6.78	-15.8	47.25	300	95.0		
1230											

Recorded By: W. Gamter

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 5/22/18

Ground Water Sampling Data Sheet

Well ID: MW-24 Sample ID: MW-24 Sample Time: 0815

Casing diameter/type: 2" Well location: O'Reilly's Parking Lot Weather: 85° sun Humid
Screened interval(s): 48-53 Sampling personnel: WG/TB
Total depth: 55 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 21.74 Water level indicator: Heron
Final depth to water (w/o pump): 35.45 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 51 Pump type/model: SS Geosub

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
0745	24.96	0.526	160.6	12.57	7.19	-34.4	23.49	325	27.8		Little to no recharge
0750	24.96	0.585	32.5	2.62	7.07	-33.8	24.57	300	81.8		
0755	25.15	0.591	16.6	1.36	7.04	-37.0	25.96	250	65.8		
0800	25.22	0.596	12.2	1.00	7.03	-46.3	27.64	300	48.6		
0805	25.42	0.598	10.6	0.87	7.00	-48.6	28.74	300	36.8		

Recorded By: W. Cyr

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 5/24/18

Ground Water Sampling Data Sheet

Well ID: MW-25 Sample ID: MW-25 Sample Time: /

Casing diameter/type: Well location: Century Appliance Weather: Clear, Hot 89°
Screened interval(s): Sampling personnel: WG/JB
Total depth: 29.50 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 29.43 Water level indicator: Heron
Final depth to water (w/o pump): 29.45 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: Pump type/model: /

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
						No Sample					
						Tried to bail, could not					
						get any water to					
						surface					

Recorded By:_____

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	EA Project #: 1434270 B3 Client: EPA Region 6 Site: Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas Description: Vapor Intrusion Assessment Sampling
JAS / JTB	Jones Rd	

Location ID (Address): ASI-101 (Grocery Store-Back)

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud ____ He% Tedlar Bag ____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0 / 0 for DUP can

Sample Type
- ☒ Indoor Air
- ☐ Sub-Slab
- ☐ Crawl Space Air
- ☐ Outdoor Air
- ☐ Active Soil Gas

Analysis (Circle):
- TO-15
- TO-15 LL
- TO-15 SIM
- ASTM D1945 Fixed Gases

Duplicate: ☑ Yes ☐ No

Pressure recorded in Inches of Hg

Summa Sample ID: ASI-101-06052018	Duplicate Summa Sample ID: ASI-101-DUP-06052018
Summa Canister ID: H3434	Summa Canister ID: 0169
Initial Gauge Pressure: -30 Initial Reg. Pressure: -30+	Initial Gauge Pressure: -30 Initial Reg. Pressure: -29
Flow Control ID: 04081	Flow Control ID: 04069
Flow Control Rate (ml/min): 11.67	Flow Control Rate (ml/min): 11.67
Canister Start Time/Date: 1110 6-5-18	Canister Start Time/Date: 1110 6-5-18
Canister End Time/Date: 1924 6-5-18	Canister End Time/Date: 1924 6-5-18
Final Canister Pressure: -4	Final Canister Pressure: -4

Comments/Observations:

Reg Gauge reading -3 @ 0 (without being on) - ASI-101 Parent

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	EA Project #: 1434270 B3 Client: EPA Region 6 Site: Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas Description: Vapor Intrusion Assessment Sampling
JAS/JTB	Jones Rd	

Location ID (Address): ASI-102 (Grocery Store Front)

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud ____ He% Tedlar Bag ____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0

Sample Type

- ☒ Indoor Air
- ☐ Sub-Slab
- ☐ Crawl Space Air
- ☐ Outdoor Air
- ☐ Active Soil Gas

Analysis (Circle):

- TO-15
- TO-15 LL
- TO-15 SIM
- ASTM D1945 Fixed Gases

Duplicate: ☐ Yes ☐ No

Pressure recorded in Inches of Hg

Summa Sample ID: ASI-102-06052018

Summa Canister ID: 0185

Initial Gauge Pressure: -30 Initial Reg. Pressure: -30+

Flow Control ID: 04075

Flow Control Rate (ml/min): 11.67

Canister Start Time/Date: 1111 6-5-18

Canister End Time/Date: 1922 6-5-18

Final Canister Pressure: -3

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

Doors (Front and Back opened up) - at the time of sample pickup (end of sample time)

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	EA Project #: 1434270 B3 Client: EPA Region 6 Site: Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas Description: Vapor Intrusion Assessment Sampling
JAS/JTB	Jones Rd	

Location ID (Address): ASI-103 (Indo-Pak Restaurant Back)

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud____ He% Tedlar Bag____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0

Sample Type
- ☑ Indoor Air
- ☐ Sub-Slab
- ☐ Crawl Space Air
- ☐ Outdoor Air
- ☐ Active Soil Gas

Analysis (Circle):
- TO-15
- TO-15 LL
- TO-15 SIM
- ASTM D1945 Fixed Gases

Duplicate: ☐ Yes ☐ No

Pressure recorded in Inches of Hg

Summa Sample ID: ASI-103-06052018

Summa Canister ID: A0132

Initial Gauge Pressure: -30 Initial Reg. Pressure: -29

Flow Control ID: 0407D

Flow Control Rate (ml/min): 11.67

Canister Start Time/Date: 1112 6-5-2018

Canister End Time/Date: 1927 6-5-2018

Final Canister Pressure: -4

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	EA Project #: 1434270 B3 Client: EPA Region 6 Site: Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas Description: Vapor Intrusion Assessment Sampling
JAS / JTB	Jones Rd	

Location ID (Address): ASI-104 (Indo-Pak Restaurant) Front

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud ____ He% Tedlar Bag ____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0

Sample Type

- ☑ Indoor Air
- ☐ Sub-Slab
- ☐ Crawl Space Air
- ☐ Outdoor Air
- ☐ Active Soil Gas

Analysis (Circle):

- TO-15
- TO-15 LL
- TO-15 SIM
- ASTM D1945 Fixed Gases

Duplicate: ☐ Yes ☐ No

Pressure recorded in Inches of Hg

Summa Sample ID: ASI-104-06052018

Summa Canister ID: 0135

Initial Gauge Pressure: -30 Initial Reg. Pressure: -30

Flow Control ID: 04076

Flow Control Rate (ml/min): 11.67

Canister Start Time/Date: 1112 6-5-2018

Canister End Time/Date: 1926 6-5-2018

Final Canister Pressure: -4

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	EA Project #: 1434270 B3 Client: EPA Region 6 Site: Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas Description: Vapor Intrusion Assessment Sampling
JAS / JTB	Jones Rd	

Location ID (Address): MeKong ASI-105

Probe Installation Date/Time: ~~_____~~

Slab Thickness: ~~_____~~ Probe Length: ~~_____~~

Helium Leak Check Date/Time: ~~_____~~

He% ~~Shroud~~____ He% Tedlar Bag____ V O C Purge ~~_____~~

Shut in Check PSI drop in 1 minute: 0

Sample Type

- [X] Indoor Air
- [ ] Sub-Slab
- [ ] Crawl Space Air
- [ ] Outdoor Air
- [ ] Active Soil Gas

Analysis (Circle):

- TO-15
- TO-15 LL
- TO-15 SIM
- ASTM D1945 Fixed Gases

Duplicate: [ ] Yes [ ] No

Pressure recorded in Inches of Hg

Summa Sample ID: ASI-105-06052018

Summa Canister ID: H3444

Initial Gauge Pressure: -30 Initial Reg. Pressure: -29.5

Flow Control ID: 04063

Flow Control Rate (ml/min): 11.47 ml/min

Canister Start Time/Date: 0903 6-5-18

Canister End Time/Date: 1739 6-5-18

Final Canister Pressure: -4

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	
JAS/JTB	Jones Rd	**EA Project #:** 1434270 B3 **Client:** EPA Region 6 **Site:** Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas **Description:** Vapor Intrusion Assessment Sampling

Location ID (Address): ASI-106 (Mating)

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud____ He% Tedlar Bag____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0

Sample Type	Analysis (Circle):
☒ Indoor Air	TO-15
☐ Sub-Slab	TO-15 LL
☐ Crawl Space Air	TO-15 SIM
☐ Outdoor Air	ASTM D1945 Fixed Gases
☐ Active Soil Gas	

Duplicate: ☐ Yes ☐ No

Pressure recorded in Inches of Hg

Summa Sample ID: ASI-106-06052018

Summa Canister ID: H3440

Initial Gauge Pressure: -30 Initial Reg. Pressure: -30

Flow Control ID: 04073

Flow Control Rate (ml/min): 11.67

Canister Start Time/Date: 0858 6-5-18

Canister End Time/Date: 1740 6-5-18

Final Canister Pressure: -4

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	
JAS/JTB	Jones Rd	**EA Project #:** 1434270 B3 **Client:** EPA Region 6 **Site:** Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas **Description:** Vapor Intrusion Assessment Sampling

Location ID (Address): ASBKG-1 (Parking Lot-West)

Probe Installation Date/Time: ~~_____~~

Slab Thickness: ~~_____~~ Probe Length: ~~_____~~

Helium Leak Check Date/Time: ~~_____~~

He% Shroud ~~___~~ He% Tedlar Bag ~~___~~ V O C Purge ~~_____~~

Shut in Check PSI drop in 1 minute: 0

Sample Type

- ☒ Indoor Air JAS
- ☐ Sub-Slab
- ☐ Crawl Space Air
- ☒ Outdoor Air
- ☐ Active Soil Gas

Analysis (Circle):

- TO-15
- ~~TO-15 LL~~
- TO-15 SIM
- ASTM D1945 Fixed Gases

Duplicate: ☐ Yes ☐ No

Pressure recorded in Inches of Hg

Summa Sample ID: ASBKG-1-06052018

Summa Canister ID: 0282

Initial Gauge Pressure: -30 Initial Reg. Pressure: -29

Flow Control ID: 04080

Flow Control Rate (ml/min): 11.47

Canister Start Time/Date: 1113 6-5-2018

Canister End Time/Date: 1932 6-5-2018

Final Canister Pressure: -7

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	
JAS / JTB	Jones Rd	**EA Project #:** 1434270 B3 **Client:** EPA Region 6 **Site:** Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas **Description:** Vapor Intrusion Assessment Sampling

Location ID (Address): ASBK6-2 (Background) E Parking Lot

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud ____ He% Tedlar Bag ____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0

Sample Type	Analysis (Circle):
☐ Indoor Air	TO-15
☐ Sub-Slab	TO-15 LL
☐ Crawl Space Air	TO-15 SIM
☒ Outdoor Air	ASTM D1945 Fixed Gases
☐ Active Soil Gas	

Duplicate: ☐ Yes ☐ No

Pressure recorded in Inches of Hg

Summa Sample ID: ASBK6-2-06052018

Summa Canister ID: 0275

Initial Gauge Pressure: -30 Initial Reg. Pressure: -30

Flow Control ID: 04066

Flow Control Rate (ml/min): 11.67

Canister Start Time/Date: 0856 6-5-18

Canister End Time/Date: 1432 6-5-18

Final Canister Pressure: -4

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

_____

_____

_____

_____

_____

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	EA Project #: 1434270 B3 Client: EPA Region 6 Site: Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas Description: Vapor Intrusion Assessment Sampling
JS/JTB		

Location ID (Address): Background-1 (True-West)

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud____ He% Tedlar Bag____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0

Sample Type	Analysis (Circle):
☐ Indoor Air	TO-15
☐ Sub-Slab	TO-15 LL
☐ Crawl Space Air	TO-15 SIM
☑ Outdoor Air	ASTM D1945 Fixed Gases
☐ Active Soil Gas	

Duplicate: ☐ Yes ☑ No

Pressure recorded in Inches of Hg

Summa Sample ID: ASBKG-1-11042018

Summa Canister ID: H00289

Initial Gauge Pressure: -30+ Initial Reg. Pressure: 30+

Flow Control ID: 04063

Flow Control Rate (ml/min): _____

Canister Start Time/Date: 0917 / 11-4-18

Canister End Time/Date: 1725 / 11-4-18

Final Canister Pressure: -4.5

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

Wind S/SE All day.

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	EA Project #: 1434270 B3 Client: EPA Region 6 Site: Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas Description: Vapor Intrusion Assessment Sampling
JS / JTB		

Location ID (Address): Background (light pole - East)

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud____ He% Tedlar Bag____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0

Sample Type	Analysis (Circle):
☐ Indoor Air	TO-15
☐ Sub-Slab	TO-15 LL
☐ Crawl Space Air	TO-15 SIM
☐ Outdoor Air	ASTM D1945 Fixed Gases
☐ Active Soil Gas	

Duplicate: ☐ Yes ☐ No

Pressure recorded in Inches of Hg

Summa Sample ID: ASBK6-2-11062018

Summa Canister ID: 0283

Initial Gauge Pressure: ~~-30+~~ Initial Reg. Pressure: -30+

Flow Control ID: 04073

Flow Control Rate (ml/min): _____

Canister Start Time/Date: 1045 / 11-6-18

Canister End Time/Date: 1845 / 11-6-18

Final Canister Pressure: -4

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

Wind S / SE All Day

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	EA Project #: 1434270 B3 Client: EPA Region 6 Site: Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas Description: Vapor Intrusion Assessment Sampling
JS/JTB		

Location ID (Address): Former Grocery (Back)

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud____ He% Tedlar Bag____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0

Sample Type	Analysis (Circle):
☑ Indoor Air	TO-15
☐ Sub-Slab	TO-15 LL
☐ Crawl Space Air	TO-15 SIM
☐ Outdoor Air	ASTM D1945 Fixed Gases
☐ Active Soil Gas	

Duplicate: ☑ Yes ☐ No

Pressure recorded in Inches of Hg

Summa Sample ID: ASI-101-11062018

Summa Canister ID: 0275

Initial Gauge Pressure: -30 Initial Reg. Pressure: -30+

Flow Control ID: 04081

Flow Control Rate (ml/min): _____

Canister Start Time/Date: 1020 / 11-6-18

Canister End Time/Date: 1825 / 11-6-18

Final Canister Pressure: -3

Duplicate

Summa Sample ID: ASI-101-DUP-11062018

Summa Canister ID: 0169

Initial Gauge Pressure: -30 Initial Reg. Pressure: -30+

Flow Control ID: 04072

Flow Control Rate (ml/min): _____

Canister Start Time/Date: 1020 11-6-18

Canister End Time/Date: 1825 / 11-6-18

Final Canister Pressure: -3

Comments/Observations:

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	EA Project #: 1434270 B3 Client: EPA Region 6 Site: Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas Description: Vapor Intrusion Assessment Sampling
JS / JTB		

Location ID (Address): Former Grocery (Front)

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud____ He% Tedlar Bag____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0

Sample Type	Analysis (Circle):
☑ Indoor Air	TO-15
☐ Sub-Slab	TO-15 LL
☐ Crawl Space Air	TO-15 SIM
☐ Outdoor Air	ASTM D1945 Fixed Gases
☐ Active Soil Gas	

Duplicate: ☐ Yes ☑ No

Pressure recorded in Inches of Hg

Summa Sample ID: AST-102-11062018

Summa Canister ID: 0166

Initial Gauge Pressure: -30+ Initial Reg. Pressure: -30+

Flow Control ID: 04075

Flow Control Rate (ml/min): _____

Canister Start Time/Date: 1022 | 11-6-2018

Canister End Time/Date: 1827 | 11-6-2018

Final Canister Pressure: -4

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

* Manometer Reading: 0.007 in/H2O

AC (OFF)

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	**EA Project #:** 1434270 B3 **Client:** EPA Region 6 **Site:** Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas **Description:** Vapor Intrusion Assessment Sampling
JS / JTB		

Location ID (Address): Restraunt (Back)

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud____ He% Tedlar Bag____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0

Sample Type	Analysis (Circle):
☑ Indoor Air	TO-15
☐ Sub-Slab	TO-15 LL
☐ Crawl Space Air	TO-15 SIM
☐ Outdoor Air	ASTM D1945 Fixed Gases
☐ Active Soil Gas	

Duplicate: ☐ Yes ☑ No

Pressure recorded in Inches of Hg

Summa Sample ID: ASI-103-11062018

Summa Canister ID: 0182

Initial Gauge Pressure: -30+ Initial Reg. Pressure: -30+

Flow Control ID: 04067

Flow Control Rate (ml/min): _____

Canister Start Time/Date: 1040 / 11-6-2018

Canister End Time/Date: 1842 / 11-6-2018

Final Canister Pressure: -4

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	EA Project #: 1434270 B3 Client: EPA Region 6 Site: Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas Description: Vapor Intrusion Assessment Sampling
JS/JTB		

Location ID (Address): Restraunt (Frnt)

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud____ He% Tedlar Bag____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0

Sample Type	Analysis (Circle):
☑ Indoor Air	TO-15
☐ Sub-Slab	TO-15 LL
☐ Crawl Space Air	TO-15 SIM
☐ Outdoor Air	ASTM D1945 Fixed Gases
☐ Active Soil Gas	

Duplicate: ☐ Yes ☑ No

Pressure recorded in Inches of Hg

Summa Sample ID: ASI-104-11062018

Summa Canister ID: H3444

Initial Gauge Pressure: -30+ Initial Reg. Pressure: -29.5

Flow Control ID: 04077

Flow Control Rate (ml/min): _____

Canister Start Time/Date: 1038 / 11-6-2018

Canister End Time/Date: 1840 / 11-6-2018

Final Canister Pressure: -6

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

* Under Construction - use of PVC glue used around canister

* Manometer Reading - 0.012 in H2O

AC ON

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	EA Project #: 1434270 B3 Client: EPA Region 6 Site: Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas Description: Vapor Intrusion Assessment Sampling
JS/JTB		

Location ID (Address): Mekong (back)

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud____ He% Tedlar Bag____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0

Sample Type	Analysis (Circle):
☑ Indoor Air	TO-15
☐ Sub-Slab	TO-15 LL
☐ Crawl Space Air	TO-15 SIM
☐ Outdoor Air	ASTM D1945 Fixed Gases
☐ Active Soil Gas	

Duplicate: ☐ Yes ☑ No

Pressure recorded in Inches of Hg

Summa Sample ID: AST-105-11062018

Summa Canister ID: H3429

Initial Gauge Pressure: -30 Initial Reg. Pressure: -29.5

Flow Control ID: 04080

Flow Control Rate (ml/min): _____

Canister Start Time/Date: 0925 / 11-6-2018

Canister End Time/Date: 1732 / 11-6-2018

Final Canister Pressure: -4.5

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

FIELD SAMPLING FORM FOR VI ASSESSMENT

Samplers:	Site ID:	EA Project #: 1434270 B3 Client: EPA Region 6 Site: Jones Road Ground Water Plume Superfund Site, Cypress, Harris County, Texas Description: Vapor Intrusion Assessment Sampling
JS/JTB		

Location ID (Address): Mekong (Front)

Probe Installation Date/Time: _____

Slab Thickness: _____ Probe Length: _____

Helium Leak Check Date/Time: _____

He% Shroud____ He% Tedlar Bag____ V O C Purge _____

Shut in Check PSI drop in 1 minute: 0

Sample Type	Analysis (Circle):
☑ Indoor Air	TO-15
☐ Sub-Slab	TO-15 LL
☐ Crawl Space Air	TO-15 SIM
☐ Outdoor Air	ASTM D1945 Fixed Gases
☐ Active Soil Gas	

Duplicate: ☐ Yes ☑ No

Pressure recorded in Inches of Hg

Summa Sample ID: ASI-106-11062018

Summa Canister ID: H3427

Initial Gauge Pressure: -30+ Initial Reg. Pressure: 35

Flow Control ID: 04078

Flow Control Rate (ml/min): _____

Canister Start Time/Date: 0927 / 11-6-2018

Canister End Time/Date: 1730 / 11-6-2018

Final Canister Pressure: -4.5

Duplicate

Summa Sample ID: _____

Summa Canister ID: _____

Initial Gauge Pressure: _____ Initial Reg. Pressure: _____

Flow Control ID: _____

Flow Control Rate (ml/min): _____

Canister Start Time/Date: _____

Canister End Time/Date: _____

Final Canister Pressure: _____

Comments/Observations:

Manometer Reading: .009 in/H2O

AC (ON)

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____

Date: 11/7/18

Ground Water Sampling Data Sheet

Well ID: MW-01 Sample ID: Sample Time: 1040

Casing diameter/type: 2" Well location: Halal Market Weather: Clouds 80°

Screened interval(s): 2.5-35 Sampling personnel: WG/DF

Total depth: 35 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 21.35 Water level indicator: Heron

Final depth to water (w/o pump): 23.08 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: 28.5 Pump type/model: Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1018	24.42	1.537	102.8	7.79	6.68	-125.5	21.96	400	13.3		
1021	25.16	1.560	10.3	0.82	6.63	-134.6	21.50	200	11.6		
1024	25.70	1.579	5.5	0.44	6.61	-135.5	21.42	280	11.0		
1027	25.63	1.576	4.0	0.32	6.61	-132.4	22.10	280	10.40		
1030	25.54	1.570	3.7	0.30	6.61	-135.3	22.20	280	9.63		
1033	25.46	1.566	3.2	0.26	6.60	-136.9	22.35	300	7.63		
1036	25.45	1.563	2.8	0.23	6.60	-139.0		300	7.55		

Recorded By: WG

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____

Date: 11/7/18

Ground Water Sampling Data Sheet

Well ID: MW-02 Sample ID: Sample Time: 0945

Casing diameter/type: 2" Well location: Jones Rd Weather: Cloudy 80°

Screened interval(s): 2.5-35 Sampling personnel: WG/DF

Total depth: 35 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 18.20 Water level indicator: Heron

Final depth to water (w/o pump): 20.12 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: 26.5 Pump type/model: Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
0928	23.77	1.559	63.1	5.14	7.01	18.5	19.1	200	15.8		
0931	23.10	1.559	13.3	1.11	6.89	8.3	19.21	240	31.6		
0933	23.49	1.570	6.5	0.54	6.87	3.9	19.30	200	29.1		
0936	23.54	1.566	5.0	0.42	6.85	-1.6	19.41	240	23.3		
0939	23.59	1.561	4.6	0.39	6.85	-7.6	19.51	300	19.9		
0942	23.64	1.551	4.2	0.35	6.84	-13.6	19.50	300	19.9		

Recorded By: WG

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 11/6/18

Ground Water Sampling Data Sheet

Well ID: MW-03 Sample ID: Sample Time: 1310

Casing diameter/type: 2" Well location: Behind Mekong Weather: Clouds 80°
Screened interval(s): 2.5-35 Sampling personnel: WG/DT
Total depth: 35 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 16.43 Water level indicator: Heron
Final depth to water (w/o pump): 16.64 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 26.5 Pump type/model: Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1248	21.96	0.982	40.7	3.43	7.08	-85.6	16.78	300	3193 ow		
1251	22.13	0.945	8.6	0.74	6.83	-82.7	16.78	300	1558 ow		
1254	22.50	0.937	6.3	0.54	6.72	-63.7	16.78	300	782		
1257	22.43	0.931	6.4	0.55	6.68	-57.5	16.79	300	600		
1300	22.15	0.918	6.7	0.58	6.67	-51.4	16.78	200	80		
1303	22.44	0.918	7.0	0.60	6.64	-46.1	16.78	300	38		

Recorded By: W.G

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 11/6/18

Ground Water Sampling Data Sheet

Well ID: MW-04 Sample ID: _____ Sample Time: 1400 _____ _____

Casing diameter/type: 2" Well location: Behind Melony Weather: Cloudy 80°
Screened interval(s): 2-35 Sampling personnel: WG / DT
Total depth: 35 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 15.66 Water level indicator: Heron
Final depth to water (w/o pump): 15.63 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 25.0 Pump type/model: Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1343	21.51	2.417	111.6	9.15	6.77	-128.3	/	300	29.3		W/LM Issues
1346	21.20	2.404	11.0	0.95	6.73	-155.1	/	200	27.5		
1349	21.43	2.419	3.8	0.32	6.70	-160.6	17.87	300	19.3		
1352	21.70	2.434	2.7	0.23	6.68	-162.9	17.87	300	18.1		
1355	21.87	2.446	2.3	0.20	6.68	-163.7	17.85	320	18.0		
1358	21.66	2.436	2.2	0.19	6.68	-162.1	17.80	280	17.3		

Recorded By: WG

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 11/15/18

Ground Water Sampling Data Sheet

Well ID: Mw-05 Sample ID: Mw-05 Sample Time: 1600

Casing diameter/type: 2" Well location: Behind Medony Weather: 80° cloudy
Screened interval(s): 2-35 Sampling personnel: WG/DT
Total depth: 35 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 16.20 Water level indicator: Heron
Final depth to water (w/o pump): 16.36 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 28.0 Pump type/model: Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1540	21.56	1.106	144.1	10.49	6.76	-18.9	16.44	350			
1543	21.58	1.090	27.4	2.37	6.65	-15.4	16.53	300			
1546	21.57	1.080	25.8	2.25	6.59	-12.6	16.55	300			
1549	21.55	1.071	22.1	1.94	6.56	-12.6	16.60	300			
1552	21.59	1.065	21.1	1.85	6.54	-10.8	16.60	300			
1555	21.63	1.058	20.7	1.82	6.53	-9.8	16.60	300			

Recorded By: W.G

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 11/6/18

Ground Water Sampling Data Sheet

Well ID: MW06 Sample ID: Sample Time: 1045

Casing diameter/type: 2" Well location: Weather: 80° Overcast
Screened interval(s): 2-35 Sampling personnel: WE/DF
Total depth: 35 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 30.71 Water level indicator: Heron
Final depth to water (w/o pump): 34.84 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: / Pump type/model: /

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
											Bailer

Recorded By: WE

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 11/5/18

Ground Water Sampling Data Sheet

Well ID: MW-07 Sample ID: Sample Time: 1520

Casing diameter/type: 2" Well location: Tireshop Lot Weather: Cloudy 80°

Screened interval(s): 20-35 Sampling personnel: WB/DT

Total depth: 35 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 26.29 Water level indicator: Heron

Final depth to water (w/o pump): 26.51 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: / Pump type/model: /

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
											Bail

Recorded By: WB

Jones Rd Ground Water Plume Superfund Site
Harris County, Texas

Sheet _____ of _____
Date: 11/5/18

Low-Flow Ground Water Sampling Data Sheet

Well ID: MW-08 Sample ID: Sample Time:

Casing diameter/type: Well location: Weather:

Screened interval(s): Sampling personnel:

Total depth: Sampling method:

Initial depth to water (w/o pump): Water level indicator:

Final depth to water (w/o pump): Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: Pump type/model:

	Δ < 1° C	Δ < 3%	Δ <10%	Δ <10%	Δ < 0.1 pH	Δ < 10 mV	Δ < 0.3 ft	< 1L/min	Δ < 10 NTU		Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
											Well is not accesible / has been covered by property owner

Recorded By: _____

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____

Date: 11/5/18

Ground Water Sampling Data Sheet

Well ID: MW-09 Sample ID: Sample Time: 1435

Casing diameter/type: 2" Well location: Ace Lot Weather: Humid 80°

Screened interval(s): 20-35 Sampling personnel: WG/DT

Total depth: 35 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 20.70 Water level indicator: Heron

Final depth to water (w/o pump): 20.90 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: 28 Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1415	22.19	1.287	84.3	6.17	6.73	-59.8	21.30	350	/		
1418	22.09	1.283	11.7	0.99	6.62	-83.7	21.32	350	/		
1421	22.37	1.285	5.7	0.49	6.51	-86.5	21.00	200	/		
1424	22.47	1.261	4.3	0.37	6.47	-86.4	21.13	200	/		
1427	22.80	1.259	3.9	0.34	6.46	-86.4	21.00	200	/		
1430	23.57	1.235	3.4	0.29	6.45	-92.2	21.10	200			

Recorded By: WG

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____

Date: 6/6/18

Ground Water Sampling Data Sheet

Well ID: MW-30 Sample ID: _____ Sample Time: 1130 _____ _____

Casing diameter/type: 2" Well location: P-Lot Weather: _____

Screened interval(s): 20-32.5 Sampling personnel: WE-109

Total depth: 29.63 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 24.83 WE Water level indicator: Heron

Final depth to water (w/o pump): ~~27.96~~ 24.95 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: / Pump type/model: /

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**

Bail

Recorded By: WE

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 11/7/18

Ground Water Sampling Data Sheet

Well ID: MW-21 Sample ID: Sample Time: 0845

Casing diameter/type: 2" Well location: Carlander Weather: Cloudy 85°
Screened interval(s): 20-30 Sampling personnel: WG / DT
Total depth: 29.73 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 23.62 Water level indicator: Heron
Final depth to water (w/o pump): 23.80 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 25 Pump type/model: Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
0825	23.88	1.062	62.6	5.07	6.98	-9.3	23.95	220	41.0		
0828	24.01	1.064	15.8	1.30	6.75	-9.4	24.00	380	45.0		
0831	24.43	1.078	4.6	0.38	6.68	-14.7	23.80	200	63.3		
0834	24.88	1.099	3.6	0.29	6.67	-26.4	23.98	240	33.5		
0837	24.76	1.107	2.5	0.20	6.65	-48.4	23.95	220	~~22.0~~ → 21.6		
0840	24.76	1.111	2.2	0.18	6.65	-52.6	23.97	220			

Recorded By: W.G

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 11/6/18

Ground Water Sampling Data Sheet

Well ID: MW-22 Sample ID: Sample Time: 1000

Casing diameter/type: 2" Well location: Weather: Cloudy 80°

Screened interval(s): 48-53 Sampling personnel: W/E/DT

Total depth: 55 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 45.84 Water level indicator: Heron

Final depth to water (w/o pump): 46.24 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: / Pump type/model: /

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
											Bail

Recorded By:_____

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____

Date: 11/5/18

Ground Water Sampling Data Sheet

Well ID: MW-23 Sample ID: MW-23 Sample Time: 1240

Casing diameter/type: 2" Well location: BFE Club Weather: Cloudy 75°

Screened interval(s): 48-53 Sampling personnel: WG / DT

Total depth: 55 Sampling method: **Low-flow micropurge**

Initial depth to water (w/o pump): 44.89 Water level indicator: Heron

Final depth to water (w/o pump): ~~44.7~~ 44.75 Water quality meter: YSI

Measuring point: **North side of casing** Pump depth setting: 50' Pump type/model: Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1210	23.85	0.795	41.1	3.32	6.65	-32.5	44.89	250	/		Turbidity meter didn't come w/ vial
1215	23.82	0.783	14.4	1.21	6.79	-35.5	46.23	250	/		
1218	24.18	0.791	12.5	1.03	6.82	-37.8	46.10	300	/		
1221	24.72	0.804	10.6	0.88	6.86	-42.0	46.02	250	/		
1224	25.20	0.815	9.6	0.78	6.90	-47.5	45.70	300	/		
1227	25.20	0.820	8.5	0.69	6.91	-48.5	45.87	300	/		
1230	24.80	0.817	8.3	0.69	6.91	-51.9	45.94	350	/		
1233	24.81	0.817	7.8	0.64	6.91	-54.5	46.12	350	/		

Recorded By: WG

Jones Road Ground Water Plume Superfund Site, Houston, Harris County, Texas

Sheet _____ of _____
Date: 11/6/18

Ground Water Sampling Data Sheet

Well ID: MW-24 Sample ID: MW-24 Sample Time: 0910

Casing diameter/type: 2" Well location: Oviello Auto Weather: Scattered Clouds 80°
Screened interval(s): 48-53 Sampling personnel: WG 109
Total depth: 55 Sampling method: **Low-flow micropurge**
Initial depth to water (w/o pump): 17.93 Water level indicator: Heron
Final depth to water (w/o pump): 18.68 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 51 Pump type/model: SS Monsoon

5 min	Δ < 10%	Δ < 10%			Δ < 0.1 pH		Δ < 0.3 ft	< 1L/min		< 0.5 L/min	Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
0850	23.68	0.681	40.7	3.31	7.24	-65.4	19.15	300	10.89		
0853	23.98	0.695	12.8	1.06	7.13	-74.7	19.68	200	15.7		
0856	24.36	0.701	7.4	0.61	7.10	-81.9	20.69	300	10.63		
0859	24.50	0.704	6.1	0.50	7.09	-84.3	20.89	300	10.87		
0902	24.46	0.704	5.0	0.42	7.09	-88.6	20.84	200	9.88		
0905	24.63	0.706	4.6	0.38	7.09	-91.3	20.86	200	11.01		

WG

Recorded By: _____

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Attachment 2

Field Notes

Location Houston, Harris County, TX Date 05/31/2017

Project / Client Jones Road GW Plume / VI Sample
EPA Reg 6 / 14342129.B.6

16 30	Returned to the office to process samples (MB and JS). The other team stayed on the site, waiting for the samples to be done.

05/31/2017

Location Harris Cnty Tx Date 9/11/17

Project / Client Jones Rd. GW
W Cantu

1230	MW-25	No water in Well unable to Sample
1315	MW-7	Hand bailed Well
1320	@ MW-24	Attempted to Sample. Pump stopped working, will attempt with new pump on 9/12/17
1325		Called Ajax, New pump will be delived to hotel on evening of 9/11/17
1645	MW-06	Hand Bail
1700		Back to Houston office to Pack/Ship

9/11/17

Location Houston, Harris Cty Tx Date 9/12/17

Project / Client Jones Rd. GW

W. Gantor

0855	Mw-24
0950	Mw-23
1120	Mw-22
1315	Mw-3
1430	Mw-4
1800	Mw-9

9/12/17

W. Gantor

Location Houston, Harris Cnty Tx Date 9/13/17

Project / Client Jones Rd. GW

W. Gantor

0815	Mw-08	
1010	Mw-02	
1110	Mw-1	
1345	Mw-20	
1445	Meet with EPA rep and CH2M team doing post-Harvey inspection at site. They use a single bailer drop to fill 3 vials for analysis from wells 21 and 5. EA staff had not yet sampled these wells	
1515	Mw-21	
1615	Mw-5	

9/13/17

W. Gantor

Location Harris Cnty, Tx Date 5/14/18

Project / Client EPA Reg 6 JR CMT
W. Ganter

1030	Arrive houston
1100	H/S meeting
1130	Set up on CMT-03
1315	Sample @ CMT-03-1
	Not enough water no sample
1340	Sample @ CMT-03-2
1400	Sample @ CMT-03-3
1515	Sample @ CMT-03-4 + Dupe
1600	Sample @ CMT-03-6
	L CMT-03-5 is blocked @ 115'
	CMT-03-6 2.75 Vgas - well dry or not recharging enough to produce sufficient head.
1630	CMT-3-7 is plugged with fill sand. pump cant reach water. See pics of tube covered in sand
1635	Retry to Sample CMT-3-1
1700	Sample @ CMT-3-1 only 2.5 vgas.

5/14/18
W. Ganter

Location Harris County Tx Date 5/15/18

Project / Client Reg 6 JR CMT
W. Ganter

0700	Arrive Houston office
0730	Go to get Nitrogen at Airgas
0900	Set up on CMT-02
0945	Try to sample CMT-02-7, cant reach water / no sample.
1015	Sample @ CMT-02-6 + Dupe
1045	Sample @ CMT-02-5 + MS/MSD
1130	Sample @ CMT-02-4
1150	Sample @ CMT-02-3
1215	Sample @ CMT-02-2
1250	Sample @ CMT-02-1

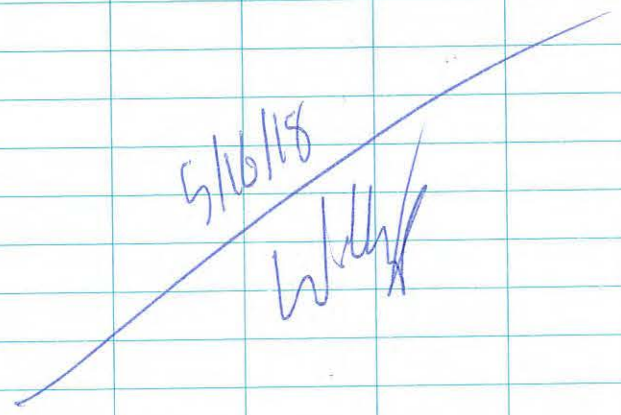
5/15/18
W. Ganter

Location Harris County, Tx Date 5/16/18

Project / Client Reg. 6 TR CMP

W. Ganter

0700	Arrive @ office
0800	Buy supplies / set up on CMP-05
0830	CMP-05-7, obstruction @ 49'
0845	Can't get probe down CMP-05-4, channel is to tight.
0855	Retry CMP-05-4 dtw: 137'
0925	Sample @ CMP-05-6
1000	Sample @ CMP-05-5 + Ms/msd
1035	Sample @ CMP-05-4
1110	Sample @ CMP-05-3
1130	Sample @ CMP-05-2
1200	Sample @ CMP-05-1

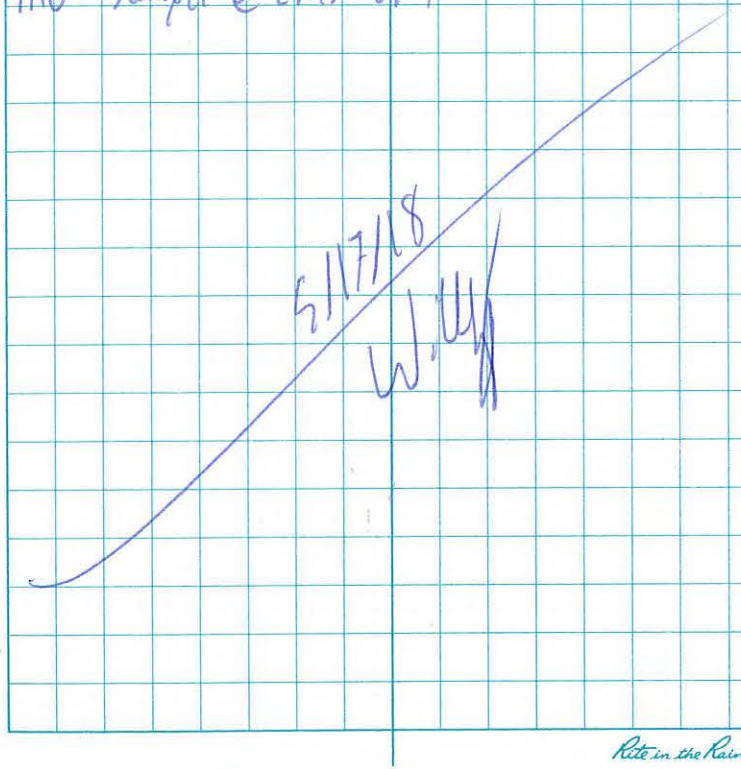


Location Harris County Tx Date 5/17/18

Project / Client Reg 6 TR CMP

W. Ganter

0700	Arrive office
0730	Set up on CMP-01
0740	CMP-01-7 is obstructed @ 72.5'
0840	Sample @ CMP-01-6 + Ms/msd
0915	Sample @ CMP-01-5 + Dupe
0940	Sample @ CMP-01-4
1015	Sample @ CMP-01-3
1040	Sample @ CMP-01-2
1110	Sample @ CMP-01-1



Location Harris Cnty Tx Date 5/21/18

Project / Client Reg 6 / IR GW
W. Gantev

0600	Leave dallas office
1045	Arrive onsite and perform H/S
1100	Set up on Mw-23
1230	Sample @ Mw-23
1300	Sample @ Mw-07 / Bailer
1430	Sample @ Mw-05 EPA Ms/msd
1500	Prepare to ship samples.

W. Gantev
5/21/18

Location Harris Cnty Tx Date 5/22/18

Project / Client Reg 6 / IR GW
W. Gantev

0700	Arrive @ office
0730	Set up on Mw-24
0815	Sample @ GW Mw-24
0820	Mw 24 doesnt seem to recharge see low flow datasheet
0845	Set up on Mw-22 and Mw-06 Wont Recharge
0920	Sample @ Mw-06 Bailer / Partial Metals
0945	Sample @ Mw-22 + Dupe Bailer
1100	Set up on Mw-03
1140	Sample @ Mw-03 + DM Ms/msd
1300	Prepare to ship samples

5/22/18
W. Gantev

Location: Harris Cnty Tx Date: 5/23/18

Project / Client: Reg 6. JR Gw

W. Ganter

0730 Set up on Mw-21

0830 Sample @ Mw-21 well wont recharge use bailer for sample

0940 Sample @ Mw-20 w/ Bailer WL to low for pump to operate Only collect Voa + Metals - see datasheet.

1100 Sample @ Mw-04

1340 Sample @ Mw-02

15 Prepare Samples to ship.

W. Ganter 5/23/18

Location: Harris Cnty, Tx Date: 5/24/18

Project / Client: Reg 6 / JR Gw

W. Ganter

0700 Arrive @ Houston office load up do H/S

0830 Sample @ Mw-01 + Dupe

1000 Sample @ Mw-09 + Dup Ms/msd

1010 Gauge SVE-08 = 103.09 ft bgs

1030 Go to Mw-25. Try to baile but cannot get and water. No Sample see datasheet for wate level

1100 Private Lab Sample @ Mw-20 - Go back and bailer sample w/ limited Recharge

W. Ganter 5/24/18

Location Houston, Harris Co., TX Date 4-4-18

Project / Client Jones Rd GW Plume / EPA Reg 6
Tower Oaks Road Repaving (CMT-04)

1130 - Dianna Johnson with Turner Paving and Construction called to notify me (JTB) of paving work starting on Friday, April 6, 2018 on Tower Oaks. Ms. Johnson invited me to a meeting @ 10 am on 4-6-18 at the Turner P + C offices on Tower Oaks JTB 4-4-18

April 6, 2018

1000 - Meeting with Turner Paving and Construction on Tower Oaks

* Met with Scott Turner of Turner Paving and Construction - Turner is preparing Tower Oaks for re-paving 4/6/18 - work re-paving on Friday, 4/13/18 - CMT-04 will be paved over with 4-6 in of Asphalt - will need to be located after re-paving

JTB 4/6/18

Location Houston, Harris Co., TX Date 4-5-18

Project / Client Jones Rd GW Plume / EPA Reg 6
Indoor VI Air Sampling

0700 - Met @ Houston office to load canisters and equipment

0730 - Mob to site

0800 - Performed shutdown test on Event 3 canisters -

* All pertinent data recorded on separate Field Sampling Form for VI Assessment for each canister

1037 - Calibration of PID

1043 - PID calibrated to 10 ppm isobutylene

* Winds - South/SE 10-15 mph
Weather - Hot 95°F / PC

1800 - Completed VI sampling and depart site for EPA office

4/5/2018

Location Houston, Harris Co., TX Date 11-6-18

Project / Client Jones Rd GW Plume / EPA 6

Indoor VI Air Sampling / JS/STB

0850	Depart Houston office for site
0855	Health + Safety Meeting conducted
0856	Begin setting up Summa Canisters for Indoor VI air sampling
0915	Begin setting out canisters - All summa canister data collected on separate Field Sampling Form for VI Assessment
1515	Calibration of PID
	Wind - S/SE 10-15 mph (gusty)
1900	Completed Indoor Air VI Sampling
	11-7-18 - All canister will be QA/QC/COCs completed
	11-8-18 - Canisters will be hand delivered to EPA Regional Lab

JS 11-6-18

Location _____ Date _____

Project / Client _____

Location Houston, Harris Co, TX Date 11/24/13

Project / Client Jones Rd GW Plume / EPA R6
SVE Pilot Test

0715 Alan, Jose, Donny onsite
Dropped off GAC drums and proceed to make out of site.

≈0830 All offsite

≈1400 Donny and Jose @ Dallas office
(stopped by to drop off equipment @ AJAX)
Demobed

11/24/13

Location Harris County TX Date 11/5/18

Project / Client Jones Rd
W. Gunter

0630 Leave Dallas office
1100 Arrive @ Houston office
1240 Sample MW-23
1320 Sample MW-07 w/ Bailer
1435 Sample MW-09
1600 Sample MW-05

11/5/18

Location Harris County Fl Date 11/6/18

Project / Client Jones Road / Hwy 6
W Canter

0910	Sample	Mw-24
1000	Sample	Mw-22
1045	Sample	Mw-06
1130	Sample	Mw-20
1310	Sample	Mw-03
1400	Sample	Mw-04

Willy

11/6/18

Location Date

Project / Client

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Attachment 3

Photo Log

Photograph No. 1 (30 November 2015)
Description: Purging MW-06

Photograph No. 2 (30 November 2015)
Description: Preparing to do low-flow sampling in MW-22

Photograph No.3 (1 December 2015)
Description: Low flow sampling in MW-24

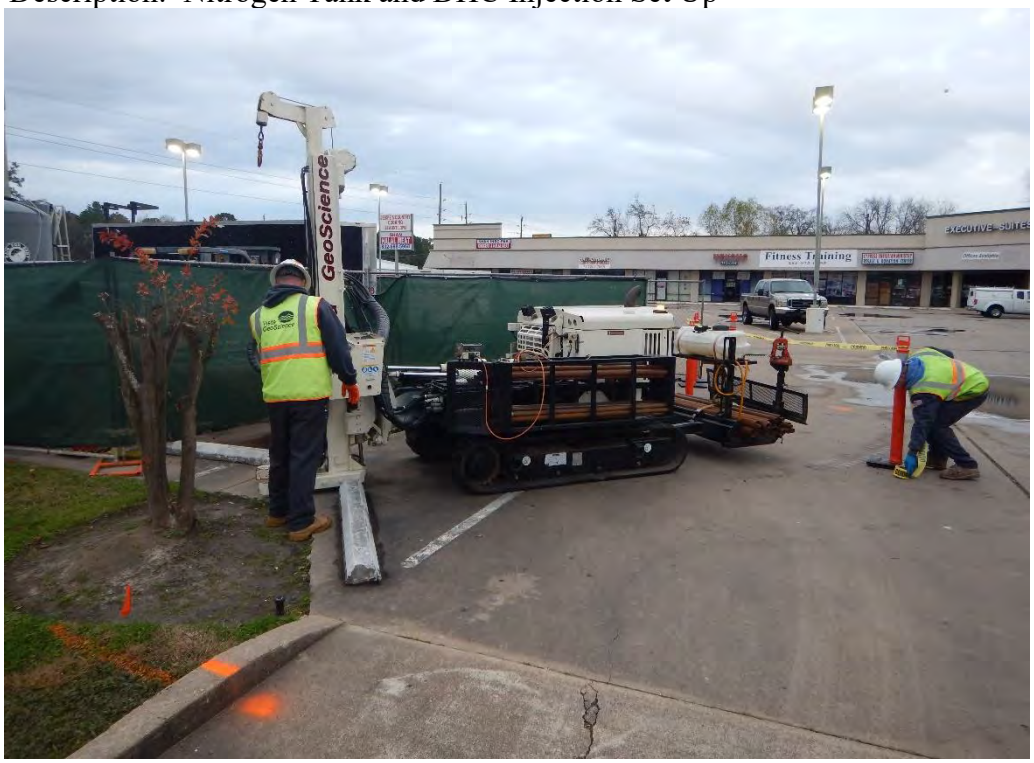
Photograph No. 4 (2 December 2015)
Description: Water purge from MW-20

Photograph No. 5 (3 December 2015)
Description: Low flow purging and sampling MW-02

Photograph No. 1 (25 January 2016)
Description: EHC pre-mix

Photograph No. 2 (25 January 2016)
Description: Injection Tool

Photograph No.3 (25 January 2016)
Description: Nitrogen Tank and DHC Injection Set Up



Photograph No. 4 (26 January 2016)
Description: Driving Injection Rods at Point 63

Photograph No. 5 (26 January 2016)
Description: Connecting

Photograph No. 6 (26 January 2016)
Description: Pumping EHC

Photograph No. 7 (26 January 2016)
Description: Checking DO and ORP levels prior to injection.

Photograph No. 8 (27 January 2016)
Description: Injection rod during injection.

Photograph No. 9 (29 January 2016)
Description: Concrete repair bore hole

Photograph No. 10 (29 January 2016)
Description: Daylighting from IW-3

Photograph No. 11 (30 January 2016)
Description: Setting up safety devices.

Photograph No. 12 (1 February 2016)
Description: Staging drums for removal.

Photograph No. 1 (18 April 2016)
Description: MW-02

Photograph No. 2 (18 April 2016)
Description: MW-03

Photograph No.3 (18 April 2016)
Description: MW-08 hidden under 8 inches of soil

Photograph No. 4 (18 April 2016)
Description: MW-20

Photograph No. 1(22 September 2016)
Description: MW-20

Photograph No. 2 (22 September 2016)
Description: MW-09

Photograph No. 1 (23 February 2017)
Description: Purging MW-01

Photograph No. 2 (22 February 2017)
Description: Preparing to gauge MW-03

Photograph No.3 (21 February 2017)
Description: Setting up on MW-08 for low flow

Photograph No. 4 (21 February 2017)
Description: Location MW-20

Photograph No. 1 (13 September 2017)
Description: Location MW-08

Photograph No. 2 (13 September 2017)
Description: Location MW-20

Photograph No. 1 (27 March 2018)
Description: EHC pre-mix

Photograph No. 2 (27 March 2018)
Description: EHC mixing area

Photograph No. 3 (27 March 2018)
Description: Injection Point

Photograph No. 4 (28 March 2018)
Description: EHC staging area

Photograph No. 5 (28 March 2018)
Description: Injection point plugging

Photo Log

Photograph No. 01 (12 September 2017)
September 2017- Groundwater Sampling Event
Sampling MW-23

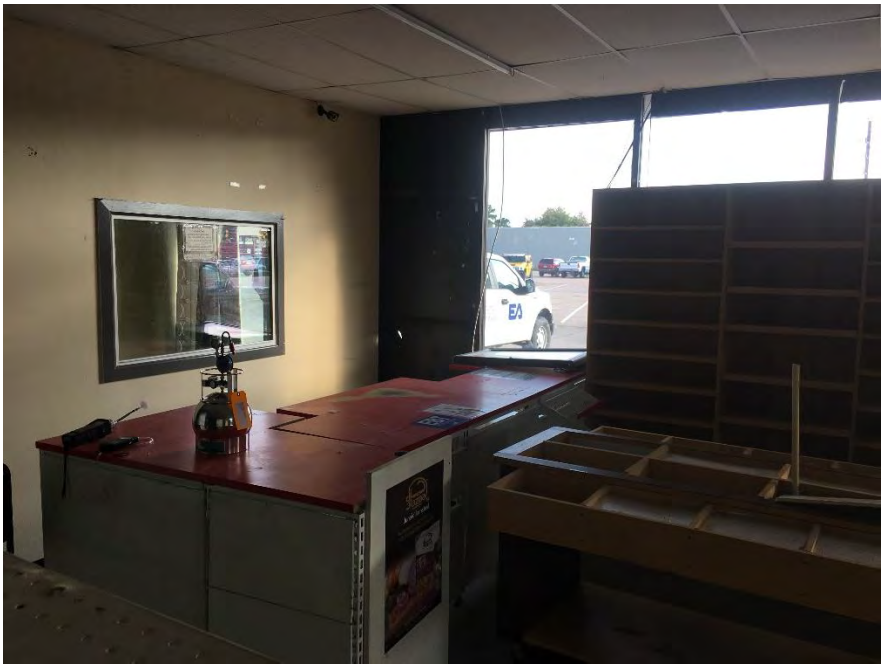
Photograph No. 02 (12 September 2017)
September 2017- Groundwater Sampling Event
Sampling MW-20

Photograph No. 03 (13 September 2017)
September 2017- Groundwater Sampling Event
Sampling MW-08

Photograph No. 04 (June 2018)
June 2018 – Vapor Intrusion (VI) Sampling Event
VI Summa canister for ambient air

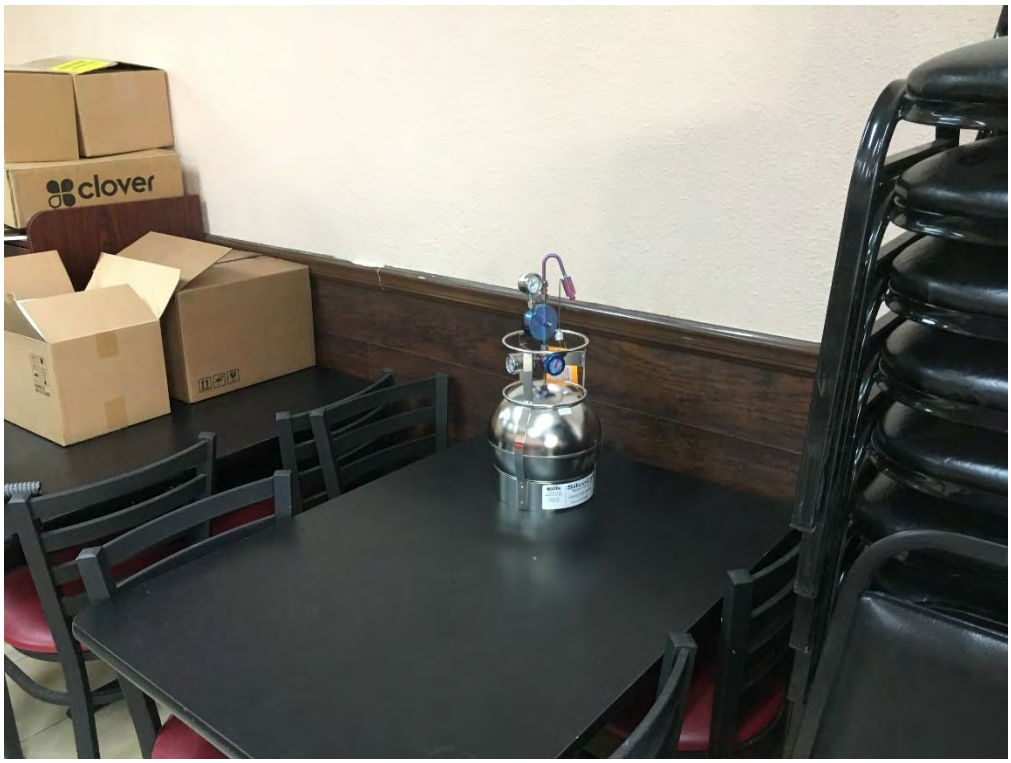
Photograph No. 05 (June 2018)
June 2018 – VI Sampling Event
VI Summa canisters in the far left corner

Photograph No. 06 (June 2018)
June 2018 – VI Sampling Event
VI Summa canisters on a restaurant table



Photograph No. 07 (November 2018)
November 2018 – VI Sampling Event
VI Summa canister on a countertop

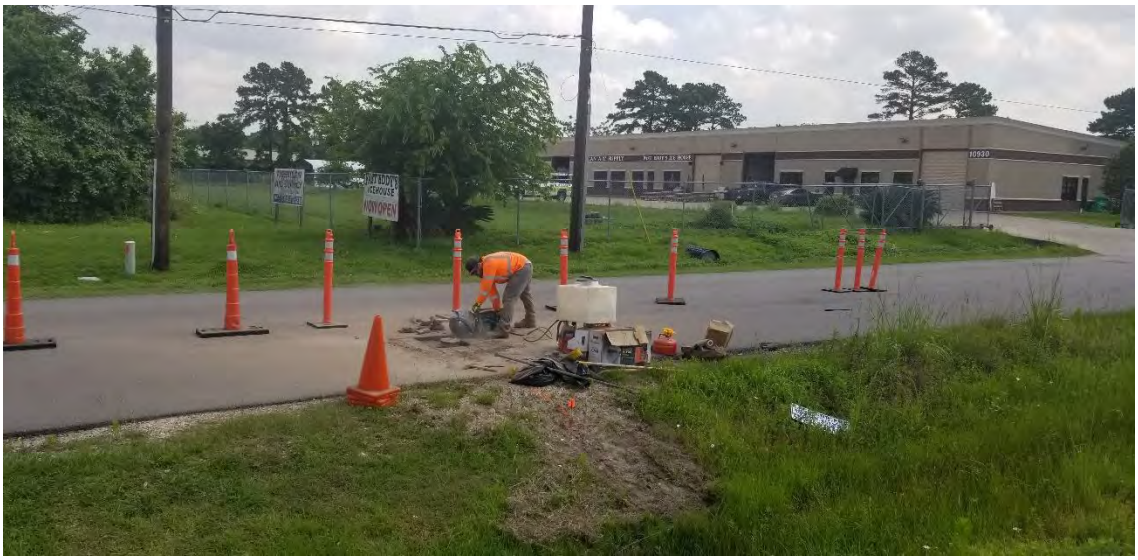
Photograph No. 08 (November 2018)
November 2018 – VI Sampling Event
VI Summa canister in the restaurant kitchen



Photograph No. 09 (November 2018)
November 2018 – VI Sampling Event
VI Summa canister on restaurant table

Photograph No. 10 (May 2019)
CMT-04 well repair

Photograph No. 11 (May 2019)
CMT-04 well repair



Photograph No. 12 (May 2019)
CMT-04 well repair

Photograph No. 13 (May 2019)
Completion of well rehab in CMT-04

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Attachment 4

Vapor Intrusion Data

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6 Laboratory
Environmental Services Branch
10625 Fallstone Road, Houston, TX 77099
Phone: (281)983-2100 Fax: (281)983-2248

Site Name ----------	Jones Road Groundwater Plume
Sample Collection Date(s)--	06/05/18
Contact----------	Raji Josiam (6SF-RA)
Report Date----------	07/18/18
Project #----------	18SF079
Work Order(s)----------	1806003

Analyses included in this report:

Air TO-15 (Vapor Instusion)

Report Narrative

Standard procedures for quality assurance and quality control were followed in the analysis and reporting of the sample results. The results apply only to the samples tested. This final report should only be reproduced in full.

The reporting limit (sometimes referred to as a quantitation limit) is defined as the lowest concentration at which an analyte can be reliably measured and reported without qualification. Reporting limits are adjusted for sample size, dilution, and matrix interference. Concentrations below the reporting limit are reported as non-detects or <RL.

For a list of ISO 17025 accredited methods go to:
http://region6a.epa.gov/intranet/6md/lab/labisocertification2018.pdf

Report Approvals:

Richard McMillin
Region 6 Laboratory Technical Manager

David W. McQuiddy
Region 6 Laboratory Branch Chief

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6 Environmental Services Branch Laboratory

10625 Fallstone Road
Houston, Texas 77099

Sample Receipt and Disposal

Site Name: Jones Road Groundwater Plume Project Number: 18SF079

Data Management Coordinator: Christy Warren

_____ / /

Data Management Coordinator Signature Date

Date Transmitted: _____/_____/_____

Please have the U.S. EPA Project Manager/Officer call the Data Management Coordinator at 3-2137 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Christy Warren
Data Management Coordinator
Region 6 Laboratory
6MD-HS

_____/____/_____

Received by and Date

Comments:

The laboratory routinely disposes of samples 90 days after all analyses have been completed. If you have a need to hold these samples in custody longer than 90 days, please sign below.

_____ _____

Signature Date

Please provide a reason for holding:

Environmental Protection Agency

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ANALYTICAL REPORT FOR SAMPLES

Station ID	Laboratory ID	Sample Type	Date Collected	Date Received
ASBKG-1-06052018 (0282)	1806003-01	air	6/5/18 19:32	06/06/18 10:40
ASBKG-2-06052018 (0275)	1806003-02	air	6/5/18 16:32	06/06/18 10:40
ASI-101-06052018 (H3434)	1806003-03	air	6/5/18 19:24	06/06/18 10:40
ASI-101-DUP-06052018 (0169)	1806003-04	air	6/5/18 19:24	06/06/18 10:40
ASI-102-06052018 (0185)	1806003-05	air	6/5/18 19:22	06/06/18 10:40
ASI-103-06052018 (A0132)	1806003-06	air	6/5/18 19:27	06/06/18 10:40
ASI-104-06052018 (0135)	1806003-07	air	6/5/18 19:26	06/06/18 10:40
ASI-105-06052018 (H3444)	1806003-08	air	6/5/18 17:39	06/06/18 10:40
ASI-106-06052018 (H3440)	1806003-09	air	6/5/18 17:40	06/06/18 10:40

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QC SUMMARY REPORT

Air TO-15 (Vapor Instusion)

B8F1905

air

Samples: 9 **ReExts: 0**

LAB NUMBER	SOURCE
B8F1905-BLK1	
B8F1905-BLK2	
B8F1905-BS1	
B8F1905-BS2	
B8F1905-BSD1	
B8F1905-DUP1	1806003-05

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1806003-01 **Station ID: ASBKG-1-06052018 (0282)**

Batch: B8F1905 Date Collected: 06/05/18 Initial Pressure: 19.74 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	10.9		108	70-130	06/12/18	06/19/18
Toluene-d8	10.1		100	70-130	"	"
4-Bromofluorobenzene	10.3		102	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	U	U		0.15	0.39	1.5	06/12/18	06/19/18
1,1-Dichloroethene (75-35-4)	U	U		0.15	0.60	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.15	0.60	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U	U		0.15	0.60	"	"	"
Trichloroethene (79-01-6)	U	U		0.15	0.81	"	"	"
Tetrachloroethene (127-18-4)	U	U		0.15	1.02	"	"	"

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1806003-02 **Station ID: ASBKG-2-06052018 (0275)**

Batch: B8F1905 Date Collected: 06/05/18 Initial Pressure: 19.74 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	10.9		108	70-130	06/12/18	06/19/18
Toluene-d8	10.2		101	70-130	"	"
4-Bromofluorobenzene	10.3		102	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	U	U		0.21	0.55	2.1	06/12/18	06/19/18
1,1-Dichloroethene (75-35-4)	U	U		0.21	0.85	"	"	"
trans-1,2-Dichloroethene (156-60-5)	**0.28**	**1.10**		0.21	0.85	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U	U		0.21	0.85	"	"	"
Trichloroethene (79-01-6)	U	U		0.21	1.15	"	"	"
Tetrachloroethene (127-18-4)	U	U		0.21	1.45	"	"	"

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1806003-03 **Station ID: ASI-101-06052018 (H3434)**

Batch: B8F1905 Date Collected: 06/05/18 Initial Pressure: 19.74 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	11.0		110	70-130	06/12/18	06/19/18
Toluene-d8	10.2		102	70-130	"	"
4-Bromofluorobenzene	10.4		104	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	**0.87**	**2.23**		0.16	0.40	1.6	06/12/18	06/19/18
1,1-Dichloroethene (75-35-4)	U	U		0.16	0.62	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.16	0.62	"	"	"
cis-1,2-Dichloroethene (156-59-2)	**1.32**	**5.26**		0.16	0.62	"	"	"
Trichloroethene (79-01-6)	**1.31**	**7.04**		0.16	0.84	"	"	"
Tetrachloroethene (127-18-4)	**16.2**	**110**		0.16	1.06	"	"	"

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1806003-04 **Station ID: ASI-101-DUP-06052018 (0169)**

Batch: B8F1905 Date Collected: 06/05/18 Initial Pressure: 19.71 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	11.2		112	70-130	06/12/18	06/18/18
Toluene-d8	10.2		102	70-130	"	"
4-Bromofluorobenzene	10.5		105	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	**0.94**	**2.40**		0.16	0.40	1.6	06/12/18	06/18/18
1,1-Dichloroethene (75-35-4)	U	U		0.16	0.62	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.16	0.62	"	"	"
cis-1,2-Dichloroethene (156-59-2)	**1.31**	**5.21**		0.16	0.62	"	"	"
Trichloroethene (79-01-6)	**1.28**	**6.89**		0.16	0.84	"	"	"
Tetrachloroethene (127-18-4)	**15.8**	**108**		0.16	1.06	"	"	"

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1806003-05 **Station ID: ASI-102-06052018 (0185)**

Batch: B8F1905 Date Collected: 06/05/18 Initial Pressure: 19.71 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	11.1		110	70-130	06/12/18	06/18/18
Toluene-d8	10.2		101	70-130	"	"
4-Bromofluorobenzene	10.4		103	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	**1.09**	**2.80**		0.15	0.39	1.5	06/12/18	06/18/18
1,1-Dichloroethene (75-35-4)	U	U		0.15	0.61	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.15	0.61	"	"	"
cis-1,2-Dichloroethene (156-59-2)	**1.25**	**4.96**		0.15	0.61	"	"	"
Trichloroethene (79-01-6)	**1.14**	**6.14**		0.15	0.83	"	"	"
Tetrachloroethene (127-18-4)	**13.3**	**90.3**		0.15	1.05	"	"	"

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1806003-06 **Station ID: ASI-103-06052018 (A0132)**

Batch: B8F1905 Date Collected: 06/05/18 Initial Pressure: 19.70 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	10.9		108	70-130	06/12/18	06/18/18
Toluene-d8	10.2		101	70-130	"	"
4-Bromofluorobenzene	10.5		104	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	**0.71**	**1.83**		0.16	0.40	1.6	06/12/18	06/18/18
1,1-Dichloroethene (75-35-4)	U	U		0.16	0.62	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.16	0.62	"	"	"
cis-1,2-Dichloroethene (156-59-2)	**1.18**	**4.69**		0.16	0.62	"	"	"
Trichloroethene (79-01-6)	**1.23**	**6.61**		0.16	0.84	"	"	"
Tetrachloroethene (127-18-4)	**16.0**	**109**		0.16	1.06	"	"	"

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1806003-07 **Station ID: ASI-104-06052018 (0135)**

Batch: B8F1905 Date Collected: 06/05/18 Initial Pressure: 19.74 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	10.8		107	70-130	06/12/18	06/18/18
Toluene-d8	10.1		100	70-130	"	"
4-Bromofluorobenzene	10.4		103	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	**0.69**	**1.77**		0.15	0.38	1.5	06/12/18	06/18/18
1,1-Dichloroethene (75-35-4)	U	U		0.15	0.58	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.15	0.58	"	"	"
cis-1,2-Dichloroethene (156-59-2)	**1.13**	**4.49**		0.15	0.58	"	"	"
Trichloroethene (79-01-6)	**1.07**	**5.77**		0.15	0.79	"	"	"
Tetrachloroethene (127-18-4)	**13.8**	**93.7**		0.15	1.00	"	"	"

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1806003-08 **Station ID: ASI-105-06052018 (H3444)**

Batch: B8F1905 Date Collected: 06/05/18 Initial Pressure: 19.75 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	10.9		108	70-130	06/12/18	06/18/18
Toluene-d8	10.2		100	70-130	"	"
4-Bromofluorobenzene	10.3		102	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	U	U		0.14	0.35	1.4	06/12/18	06/18/18
1,1-Dichloroethene (75-35-4)	U	U		0.14	0.55	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.14	0.55	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U	U		0.14	0.55	"	"	"
Trichloroethene (79-01-6)	U	U		0.14	0.74	"	"	"
Tetrachloroethene (127-18-4)	**1.20**	**8.14**		0.14	0.94	"	"	"

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1806003-09 **Station ID: ASI-106-06052018 (H3440)**

Batch: B8F1905 Date Collected: 06/05/18 Initial Pressure: 19.75 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	10.8		108	70-130	06/12/18	06/19/18
Toluene-d8	10.2		102	70-130	"	"
4-Bromofluorobenzene	10.4		104	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	U	U		0.15	0.37	1.5	06/12/18	06/19/18
1,1-Dichloroethene (75-35-4)	U	U		0.15	0.58	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.15	0.58	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U	U		0.15	0.58	"	"	"
Trichloroethene (79-01-6)	**0.28**	**1.50**		0.15	0.79	"	"	"
Tetrachloroethene (127-18-4)	**2.78**	**18.9**		0.15	0.99	"	"	"

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS - Quality Control

Batch: B8F1905 **Sample Type: air**

Blank (B8F1905-BLK1)

Prepared: 6/11/2018 Analyzed: 6/11/2018

Surrogates

ANALYTE	Result ppbv	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	10.5		10.0	105	70-130
Toluene-d8	9.92		10.0	99.2	70-130
4-Bromofluorobenzene	9.41		10.0	94.1	70-130

Targets

ANALYTE	Result ppbv	Analyte Qualifiers	Reporting Limit
Vinyl chloride	U		0.10
1,1-Dichloroethene	U		0.10
trans-1,2-Dichloroethene	U		0.10
cis-1,2-Dichloroethene	U		0.10
Trichloroethene	U		0.10
Tetrachloroethene	U		0.10

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS - Quality Control

Batch: B8F1905 **Sample Type: air**

Blank (B8F1905-BLK2)

Prepared: 6/18/2018 Analyzed: 6/18/2018

Surrogates

ANALYTE	Result ppbv	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	11.2		10.0	112	70-130
Toluene-d8	10.0		10.0	100	70-130
4-Bromofluorobenzene	10.2		10.0	102	70-130

Targets

ANALYTE	Result ppbv	Analyte Qualifiers	Reporting Limit
Vinyl chloride	U		0.10
1,1-Dichloroethene	U		0.10
trans-1,2-Dichloroethene	U		0.10
cis-1,2-Dichloroethene	U		0.10
Trichloroethene	U		0.10
Tetrachloroethene	U		0.10

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS - Quality Control

Batch: B8F1905 **Sample Type: air**

LCS (B8F1905-BS1)

Prepared: 6/11/2018 Analyzed: 6/11/2018

Surrogates

ANALYTE	Result ppbv	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	9.93		10.1	98.3	70-130
Toluene-d8	9.99		10.1	98.9	70-130
4-Bromofluorobenzene	10.2		10.1	101	70-130

Targets

ANALYTE	Result ppbv	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Vinyl chloride	10.0		0.10	10.5	95.7	70-130
1,1-Dichloroethene	9.41		0.10	10.0	94.1	70-130
trans-1,2-Dichloroethene	9.57		0.10	10.9	87.8	70-130
cis-1,2-Dichloroethene	9.94		0.10	10.2	97.5	70-130
Trichloroethene	10.4		0.10	10.8	96.0	70-130
Tetrachloroethene	10.1		0.10	10.6	95.4	70-130

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS - Quality Control

Batch: B8F1905 **Sample Type: air**

LCS (B8F1905-BS2)

Prepared: 6/18/2018 Analyzed: 6/18/2018

Surrogates

ANALYTE	Result ppbv	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	11.1		10.1	110	70-130
Toluene-d8	10.3		10.1	102	70-130
4-Bromofluorobenzene	11.0		10.1	109	70-130

Targets

ANALYTE	Result ppbv	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Vinyl chloride	9.76		0.10	10.5	93.0	70-130
1,1-Dichloroethene	8.38		0.10	10.0	83.8	70-130
trans-1,2-Dichloroethene	8.41		0.10	10.9	77.2	70-130
cis-1,2-Dichloroethene	8.70		0.10	10.2	85.3	70-130
Trichloroethene	8.92		0.10	10.8	82.6	70-130
Tetrachloroethene	8.63		0.10	10.6	81.4	70-130

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS - Quality Control

Batch: B8F1905 **Sample Type: air**

LCS Dup (B8F1905-BSD1)

Prepared: 6/11/2018 Analyzed: 6/11/2018

Surrogates

ANALYTE	Result ppbv	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	9.89		9.98	99.1	70-130
Toluene-d8	10.0		9.98	100	70-130
4-Bromofluorobenzene	10.2		9.98	102	70-130

Targets

ANALYTE	Result ppbv	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	10.1		0.10	10.5	96.5	70-130	0.79	25
1,1-Dichloroethene	9.44		0.10	10.0	94.4	70-130	0.32	25
trans-1,2-Dichloroethene	9.63		0.10	10.9	88.3	70-130	0.63	25
cis-1,2-Dichloroethene	10.0		0.10	10.2	98.2	70-130	0.80	25
Trichloroethene	10.4		0.10	10.8	96.5	70-130	0.48	25
Tetrachloroethene	10.2		0.10	10.6	95.9	70-130	0.59	25

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS - Quality Control

Batch: B8F1905 **Sample Type: air**

Duplicate (B8F1905-DUP1)

Source: 1806003-05 Prepared: 6/18/2018 Analyzed: 6/18/2018

Surrogates

ANALYTE	Result ppbv	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	11.2		10.0	112	70-130
Toluene-d8	10.2		10.0	102	70-130
4-Bromofluorobenzene	10.3		10.0	103	70-130

Targets

ANALYTE	Result ppbv	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	RPD	RPD Limit
Vinyl chloride	1.11		0.15		1.09	1.40	35
1,1-Dichloroethene	U		0.15				35
trans-1,2-Dichloroethene	U		0.15				35
cis-1,2-Dichloroethene	1.28		0.15		1.25	2.44	35
Trichloroethene	1.17		0.15		1.14	2.67	35
Tetrachloroethene	13.5		0.15		13.3	1.84	35

Environmental Protection Agency

Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

SURROGATE SUMMARY REPORT

Air TO-15 (Vapor Instusion)

air

LAB NUMBER	1,2-DCE-d4	TOL-d8	4-BFB
1806003-01	108	100	102
1806003-02	108	101	102
1806003-03	110	102	104
1806003-04	112	102	105
1806003-05	110	101	103
1806003-06	108	101	104
1806003-07	107	100	103
1806003-08	108	100	102
1806003-09	108	102	104
B8F1905-BLK1	105	99.2	94.1
B8F1905-BLK2	112	100	102
B8F1905-BS1	98.3	98.9	101
B8F1905-BS2	110	102	109
B8F1905-BSD1	99.1	100	102
B8F1905-DUP1	112	102	103

			QC LIMITS
1,2-DCE-d4	=	1,2-Dichloroethane-d4	70 - 130
TOL-d8	=	Toluene-d8	70 - 130
4-BFB	=	4-Bromofluorobenzene	70 - 130

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Qualifiers

A	This sample was extracted at a single acid pH.
HTS	Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.
U	The analyte was not detected at or above the reporting limit.

Abbreviations and Symbols

ABN	Acid Base Neutrals (Semivolatile Compounds)
AES	Atomic Emission Spectrometer
BS	Blank Spike
CVAA	Cold Vapor Atomic Absorption
DCB	Decachlorobiphenyl
ECD	Electron Capture Detector
GC	Gas Chromatograph
ICP	Inductively Coupled Plasma
ISTD	Internal Standard
LCS	Laboratory Control Sample
MS	Mass Spectrometer
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NA	Not Applicable
NPD	Nitrogen Phosphorous Detector
NR	Not Reported
PCB	Polychlorinatedbiphenyl
RL	Reporting Limit
RT	Retention Time
RPD	Relative Percent Difference

TCLP	Toxicity Characteristic Leaching Procedure
TCMX	Tetrachloro-meta-xylene
VOA	Volatile Organic Analysis
#	Out of QC limits
>LR	The result was greater than the linear range.

Initial pressure in air analyses is the pressure at which the canister was received in psia (pounds *per* square inch absolute pressure).

The pH reported for Volatile liquid samples was tested using a 0-14 pH indicator strip for the purpose of verifying chemical preservation.

The statistical software used for the reporting of toxicity data is ToxCalc 5.0.32, Environmental Toxicity Data Analysis System 1994-2007 Tidepool Scientific Software.

USEPA
DateShipped: 6/6/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-052418-140506-0051

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASBKG-1-06052018	0282	TO-15 SIM	Air	6/5/2018	19:32	1	6 L Canister	Keal Case	-30	-7	Jason Stroup	11:13:00 AM	7:32:00 PM

Special Instructions: Tag = Canister ID
Stop_Time = Sample Time

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	6/6/2018 0630	Jeff Smith	6/6/18 10:40	

USEPA
DateShipped: 6/6/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-052418-140506-0052

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASBKG-2-06052018	0275	TO-15 SIM	Air	6/5/2018	16:32	1	6 L Canister	Keal Case	-30	-4	Jason Stroup	8:56:00 AM	4:32:00 PM

Special Instructions: Tag = Canister ID
Stop_Time = Sample Time

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		6/6/18 0830		6/6/18 10:40	

USEPA
DateShipped: 6/6/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-052418-140507-0053

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-101-06052018	H3434	TO-15 SIM	Air	6/5/2018	19:24	1	6 L Canister	Keal Case	-30	-4	Jason Stroup	11:10: 00 AM	7:24:0 0 PM

Special Instructions: Tag = Canister ID
Stop_Time = Sample Time

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	6/6/18 0830		6/6/18 10:40	

USEPA
DateShipped: 6/6/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-052418-140507-0054

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-101-DUP-06052018	0169	TO-15 SIM	Air	6/5/2018	19:24	1	6 L Canister	Keal Case	-30	-4	Jason Stroup	11:10:00 AM	7:24:00 PM

Special Instructions: Tag = Canister ID
Stop_Time = Sample Time

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	E.T	6/6/18 0830		6/6/18 10:40	

USEPA
DateShipped: 6/6/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-052418-140508-0055

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-102-06052018	0185	TO-15 SIM	Air	6/5/2018	19:22	1	6 L Canister	Keal Case	-30	-3	Jason Stroup	11:11:00 AM	7:22:00 PM

Special Instructions: Tag = Canister ID
Stop_Time = Sample Time

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	6/6/18 0830		6/6/18 10:40	

USEPA
DateShipped: 6/6/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-052418-140508-0056

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-103-06052018	A0132	TO-15 SIM	Air	6/5/2018	19:27	1	6 L Canister	Keal Case	-30	-4	Jason Stroup	11:12: 00 AM	7:27:0 0 PM

Special Instructions: Tag = Canister ID
Stop_Time = Sample Time

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	6/6/18 0830		6/6/18 10:40	

USEPA
DateShipped: 6/6/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-052418-140510-0057

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-104-06052018	0135	TO-15 SIM	Air	6/5/2018	19:26	1	6 L Canister	Keal Case	-30	-4	Jason Stroup	11:12:00 AM	7:26:00 PM

Special Instructions: Tag = Canister ID
Stop_Time = Sample Time

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	6/6/2018 0820	Jeff Smith	6/6/18 10:40	

USEPA
DateShipped: 6/6/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-052418-140511-0058

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-105-06052018	H3444	TO-15 SIM	Air	6/5/2018	17:39	1	6 L Canister	Keal Case	-30	-4	Jason Stroup	9:03:00 AM	5:39:00 PM

Special Instructions: Tag = Canister ID
Stop_Time = Sample Time

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	6/6/2018 0830	Jeff Smith	6/6/18 10:40	

USEPA
DateShipped: 6/6/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-052418-140512-0059

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-106-06052018	H3440	TO-15 SIM	Air	6/5/2018	17:40	1	6 L Canister	Keal Case	-30	-4	Jason Stroup	8:58:00 AM	5:40:00 PM

Special Instructions: Tag = Canister ID
Stop_Time = Sample Time

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	6/6/18 0830	Jeff Smith	6/6/18 10:40	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6 Laboratory
Environmental Services Branch
10625 Fallstone Road, Houston, TX 77099
Phone: (281)983-2100 Fax: (281)983-2248

Site Name ----------	Jones Road Groundwater Plume
Sample Collection Date(s)--	11/06/18
Contact----------	Raji Josiam (6SF-RA)
Report Date----------	12/18/18
Project #----------	19SF023
Work Order(s)----------	1811003

Analyses included in this report:

Air TO-15 (Vapor Intrusion)

Report Narrative

Standard procedures for quality assurance and quality control were followed in the analysis and reporting of the sample results. The results apply only to the samples tested. This final report should only be reproduced in full.

The reporting limit (sometimes referred to as a quantitation limit) is defined as the lowest concentration at which an analyte can be reliably measured and reported without qualification. Reporting limits are adjusted for sample size, dilution, and matrix interference. Concentrations below the reporting limit are reported as non-detects or <RL.

For a list of ISO 17025 accredited methods go to:
http://region6a.epa.gov/intranet/6md/lab/labisocertification2018.pdf

Report Approvals:

Richard McMillin
Region 6 Laboratory Technical Manager

David W. McQuiddy
Region 6 Laboratory Branch Chief

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6 Environmental Services Branch Laboratory

10625 Fallstone Road
Houston, Texas 77099

Sample Receipt and Disposal

Site Name: Jones Road Groundwater Plume Project Number: 19SF023

Data Management Coordinator: Christy Warren

/ /

Data Management Coordinator Signature Date

Date Transmitted: _____/_____/_____

Please have the U.S. EPA Project Manager/Officer call the Data Management Coordinator at 3-2137 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Christy Warren
Data Management Coordinator
Region 6 Laboratory
6MD-HS

_____/____/_____
Received by and Date

Comments:

The laboratory routinely disposes of samples 90 days after all analyses have been completed. If you have a need to hold these samples in custody longer than 90 days, please sign below.

_____ _____
Signature Date

Please provide a reason for holding:

Environmental Protection Agency

Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
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ANALYTICAL REPORT FOR SAMPLES

Station ID	Laboratory ID	Sample Type	Date Collected	Date Received
ASBKG-1-11062018 (H00289)	1811003-01	air	11/6/18 17:25	11/08/18 09:45
ASBKG-2-11062018 (0283)	1811003-02	air	11/6/18 18:45	11/08/18 09:45
ASI-101-11062018 (0275)	1811003-03	air	11/6/18 18:25	11/08/18 09:45
ASI-101-DUP-11062018 (0169)	1811003-04	air	11/6/18 18:25	11/08/18 09:45
ASI-102-11062018 (0166)	1811003-05	air	11/6/18 18:27	11/08/18 09:45
ASI-103-11062018 (0182)	1811003-06	air	11/6/18 18:42	11/08/18 09:45
ASI-104-11062018 (H3444)	1811003-07	air	11/6/18 18:40	11/08/18 09:45
ASI-105-11062018 (H3428)	1811003-08	air	11/6/18 17:32	11/08/18 09:45
ASI-106-11062018 (H3427)	1811003-09	air	11/6/18 17:30	11/08/18 09:45

Environmental Protection Agency

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QC SUMMARY REPORT

Air TO-15 (Vapor Intrusion)

B8K2801

air

Samples: 9 **ReExts: 0**

LAB NUMBER	SOURCE
B8K2801-BLK1	
B8K2801-BS1	
B8K2801-BS2	
B8K2801-BSD1	
B8K2801-BSD2	
B8K2801-DUP1	1811003-08

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1811003-01 **Station ID: ASBKG-1-11062018 (H00289)**

Batch: B8K2801 Date Collected: 11/06/18 Initial Pressure: 13.41 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	11.6		116	70-130	11/26/18	11/27/18
Toluene-d8	10.3		103	70-130	"	"
4-Bromofluorobenzene	9.79		97.9	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	U	U		0.10	0.26	1.0	11/26/18	11/27/18
1,1-Dichloroethene (75-35-4)	U	U		0.10	0.40	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.10	0.40	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U	U		0.10	0.40	"	"	"
Trichloroethene (79-01-6)	U	U		0.10	0.54	"	"	"
Tetrachloroethene (127-18-4)	**0.17**	**1.16**		0.10	0.68	"	"	"

Environmental Protection Agency

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1811003-02 **Station ID: ASBKG-2-11062018 (0283)**

Batch: B8K2801 Date Collected: 11/06/18 Initial Pressure: 12.76 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	11.5		115	70-130	11/26/18	11/27/18
Toluene-d8	10.4		104	70-130	"	"
4-Bromofluorobenzene	9.86		98.6	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	U	U		0.10	0.26	1.0	11/26/18	11/27/18
1,1-Dichloroethene (75-35-4)	U	U		0.10	0.40	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.10	0.40	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U	U		0.10	0.40	"	"	"
Trichloroethene (79-01-6)	U	U		0.10	0.54	"	"	"
Tetrachloroethene (127-18-4)	**0.11**	**0.75**		0.10	0.68	"	"	"

Environmental Protection Agency

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1811003-03 **Station ID: ASI-101-11062018 (0275)**

Batch: B8K2801 Date Collected: 11/06/18 Initial Pressure: 12.78 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	11.5		115	70-130	11/26/18	11/27/18
Toluene-d8	10.3		103	70-130	"	"
4-Bromofluorobenzene	10.2		102	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	**0.65**	**1.66**		0.10	0.26	1.0	11/26/18	11/27/18
1,1-Dichloroethene (75-35-4)	U	U		0.10	0.40	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.10	0.40	"	"	"
cis-1,2-Dichloroethene (156-59-2)	**1.54**	**6.12**		0.10	0.40	"	"	"
Trichloroethene (79-01-6)	**0.78**	**4.20**		0.10	0.54	"	"	"
Tetrachloroethene (127-18-4)	**7.72**	**52.5**		0.10	0.68	"	"	"

Environmental Protection Agency

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1811003-04 **Station ID: ASI-101-DUP-11062018 (0169)**

Batch: B8K2801 Date Collected: 11/06/18 Initial Pressure: 12.89 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	11.3		113	70-130	11/26/18	11/27/18
Toluene-d8	10.3		103	70-130	"	"
4-Bromofluorobenzene	9.89		98.9	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	**0.64**	**1.64**		0.10	0.26	1.0	11/26/18	11/27/18
1,1-Dichloroethene (75-35-4)	U	U		0.10	0.40	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.10	0.40	"	"	"
cis-1,2-Dichloroethene (156-59-2)	**1.49**	**5.92**		0.10	0.40	"	"	"
Trichloroethene (79-01-6)	**0.74**	**3.98**		0.10	0.54	"	"	"
Tetrachloroethene (127-18-4)	**7.51**	**51**		0.10	0.68	"	"	"

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1811003-05 **Station ID: ASI-102-11062018 (0166)**

Batch: B8K2801 Date Collected: 11/06/18 Initial Pressure: 12.60 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	11.1		111	70-130	11/26/18	11/27/18
Toluene-d8	10.3		103	70-130	"	"
4-Bromofluorobenzene	9.92		99.2	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	**0.71**	**1.82**		0.10	0.26	1.0	11/26/18	11/27/18
1,1-Dichloroethene (75-35-4)	U	U		0.10	0.40	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.10	0.40	"	"	"
cis-1,2-Dichloroethene (156-59-2)	**1.74**	**6.91**		0.10	0.40	"	"	"
Trichloroethene (79-01-6)	**0.85**	**4.58**		0.10	0.54	"	"	"
Tetrachloroethene (127-18-4)	**8.30**	**56.4**		0.10	0.68	"	"	"

Environmental Protection Agency

Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1811003-06 **Station ID: ASI-103-11062018 (0182)**

Batch: B8K2801 Date Collected: 11/06/18 Initial Pressure: 13.05 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	11.0		110	70-130	11/26/18	11/27/18
Toluene-d8	10.2		102	70-130	"	"
4-Bromofluorobenzene	10.0		100	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	U	U		0.10	0.26	1.0	11/26/18	11/27/18
1,1-Dichloroethene (75-35-4)	U	U		0.10	0.40	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.10	0.40	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U	U		0.10	0.40	"	"	"
Trichloroethene (79-01-6)	**0.10**	**0.54**		0.10	0.54	"	"	"
Tetrachloroethene (127-18-4)	**0.74**	**5.03**		0.10	0.68	"	"	"

Environmental Protection Agency

Region 6 Laboratory

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1811003-07 **Station ID: ASI-104-11062018 (H3444)**

Batch: B8K2801 Date Collected: 11/06/18 Initial Pressure: 13.15 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	10.7		107	70-130	11/26/18	11/27/18
Toluene-d8	10.1		102	70-130	"	"
4-Bromofluorobenzene	9.95		99.7	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	U	U		0.10	0.26	1.0	11/26/18	11/27/18
1,1-Dichloroethene (75-35-4)	U	U		0.10	0.40	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.10	0.40	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U	U		0.10	0.40	"	"	"
Trichloroethene (79-01-6)	U	U		0.10	0.54	"	"	"
Tetrachloroethene (127-18-4)	**0.69**	**4.69**		0.10	0.68	"	"	"

Environmental Protection Agency

Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1811003-08 **Station ID: ASI-105-11062018 (H3428)**

Batch: B8K2801 Date Collected: 11/06/18 Initial Pressure: 12.65 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	10.4		104	70-130	11/26/18	11/27/18
Toluene-d8	10.2		102	70-130	"	"
4-Bromofluorobenzene	9.65		96.5	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	U	U		0.10	0.26	1.0	11/26/18	11/27/18
1,1-Dichloroethene (75-35-4)	U	U		0.10	0.40	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.10	0.40	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U	U		0.10	0.40	"	"	"
Trichloroethene (79-01-6)	U	U		0.10	0.54	"	"	"
Tetrachloroethene (127-18-4)	**0.48**	**3.26**		0.10	0.68	"	"	"

Environmental Protection Agency

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Phone:(281)983-2100 Fax:(281)983-2248

Toxic Organic Compounds in Ambient Air-TO15 - GC/MS

Lab ID: 1811003-09 **Station ID: ASI-106-11062018 (H3427)**

Batch: B8K2801 Date Collected: 11/06/18 Initial Pressure: 13.72 psia
Sample Type: air Sample Qualifiers:

Surrogates

Analyte	Result ppbv	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	10.4		104	70-130	11/26/18	11/27/18
Toluene-d8	10.1		101	70-130	"	"
4-Bromofluorobenzene	9.71		97.1	70-130	"	"

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed

Targets

Analyte (CAS Number)	Result ppbv	Result µg/m³	Analyte Qualifiers	Reporting Limit ppbv	Reporting Limit µg/m³	Dilution	Prepared	Analyzed
Vinyl chloride (75-01-4)	U	U		0.10	0.26	1.0	11/26/18	11/27/18
1,1-Dichloroethene (75-35-4)	U	U		0.10	0.40	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U	U		0.10	0.40	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U	U		0.10	0.40	"	"	"
Trichloroethene (79-01-6)	U	U		0.10	0.54	"	"	"
Tetrachloroethene (127-18-4)	**0.50**	**3.40**		0.10	0.68	"	"	"

Environmental Protection Agency

Region 6 Laboratory

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS - Quality Control

Batch: B8K2801 **Sample Type: air**

Blank (B8K2801-BLK1)

Prepared: 11/20/2018 Analyzed: 11/26/2018

Surrogates

ANALYTE	Result ppbv	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	10.3		10.0	103	70-130
Toluene-d8	10.1		10.0	101	70-130
4-Bromofluorobenzene	9.52		10.0	95.2	70-130

Targets

ANALYTE	Result ppbv	Analyte Qualifiers	Reporting Limit
Vinyl chloride	U		0.10
1,1-Dichloroethene	U		0.10
trans-1,2-Dichloroethene	U		0.10
cis-1,2-Dichloroethene	U		0.10
Trichloroethene	U		0.10
Tetrachloroethene	U		0.10

Environmental Protection Agency

Region 6 Laboratory

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS - Quality Control

Batch: B8K2801 **Sample Type: air**

LCS (B8K2801-BS1)

Prepared: 11/20/2018 Analyzed: 11/20/2018

Surrogates

ANALYTE	Result ppbv	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	10.2		9.98	102	70-130
Toluene-d8	10.1		9.98	102	70-130
4-Bromofluorobenzene	10.1		9.98	101	70-130

Targets

ANALYTE	Result ppbv	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Vinyl chloride	11.0		0.10	10.2	107	70-130
1,1-Dichloroethene	9.90		0.10	10.1	98.0	70-130
trans-1,2-Dichloroethene	11.0		0.10	11.0	99.8	70-130
cis-1,2-Dichloroethene	10.5		0.10	10.0	105	70-130
Trichloroethene	10.4		0.10	10.7	96.7	70-130
Tetrachloroethene	10.3		0.10	10.2	101	70-130

Environmental Protection Agency

Region 6 Laboratory

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS - Quality Control

Batch: B8K2801 **Sample Type: air**

LCS (B8K2801-BS2)

Prepared: 11/20/2018 Analyzed: 11/26/2018

Surrogates

ANALYTE	Result ppbv	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	10.2		9.98	103	70-130
Toluene-d8	10.2		9.98	102	70-130
4-Bromofluorobenzene	10.0		9.98	100	70-130

Targets

ANALYTE	Result ppbv	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Vinyl chloride	11.3		0.10	10.2	111	70-130
1,1-Dichloroethene	10.3		0.10	10.1	102	70-130
trans-1,2-Dichloroethene	11.4		0.10	11.0	103	70-130
cis-1,2-Dichloroethene	10.9		0.10	10.0	109	70-130
Trichloroethene	10.5		0.10	10.7	97.8	70-130
Tetrachloroethene	10.4		0.10	10.2	102	70-130

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS - Quality Control

Batch: B8K2801 **Sample Type: air**

LCS Dup (B8K2801-BSD1)

Prepared: 11/20/2018 Analyzed: 11/20/2018

Surrogates

ANALYTE	Result ppbv	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	10.6		10.0	106	70-130
Toluene-d8	10.2		10.0	102	70-130
4-Bromofluorobenzene	10.1		10.0	101	70-130

Targets

ANALYTE	Result ppbv	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	10.9		0.10	10.2	107	70-130	0.37	25
1,1-Dichloroethene	9.96		0.10	10.1	98.6	70-130	0.60	25
trans-1,2-Dichloroethene	11.1		0.10	11.0	101	70-130	0.91	25
cis-1,2-Dichloroethene	10.6		0.10	10.0	106	70-130	1.13	25
Trichloroethene	10.5		0.10	10.7	98.2	70-130	1.53	25
Tetrachloroethene	10.4		0.10	10.2	102	70-130	1.74	25

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS - Quality Control

Batch: B8K2801 **Sample Type: air**

LCS Dup (B8K2801-BSD2)

Prepared: 11/20/2018 Analyzed: 11/26/2018

Surrogates

ANALYTE	Result ppbv	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	10.4		9.98	105	70-130
Toluene-d8	10.2		9.98	103	70-130
4-Bromofluorobenzene	10.0		9.98	101	70-130

Targets

ANALYTE	Result ppbv	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	11.0		0.10	10.2	108	70-130	2.13	25
1,1-Dichloroethene	10.0		0.10	10.1	99.4	70-130	2.17	25
trans-1,2-Dichloroethene	11.1		0.10	11.0	101	70-130	1.94	25
cis-1,2-Dichloroethene	10.3		0.10	9.98	104	70-130	5.35	25
Trichloroethene	10.5		0.10	10.7	98.5	70-130	0.77	25
Tetrachloroethene	10.5		0.10	10.2	103	70-130	0.96	25

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Toxic Organic Compounds in Ambient Air-TO15 - GC/MS - Quality Control

Batch: B8K2801 **Sample Type: air**

Duplicate (B8K2801-DUP1)

Source: 1811003-08 Prepared: 11/20/2018 Analyzed: 11/27/2018

Surrogates

ANALYTE	Result ppbv	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	10.5		10.0	105	70-130
Toluene-d8	10.1		10.0	101	70-130
4-Bromofluorobenzene	9.63		10.0	96.3	70-130

Targets

ANALYTE	Result ppbv	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	RPD	RPD Limit
Vinyl chloride	U		0.10				35
1,1-Dichloroethene	U		0.10				35
trans-1,2-Dichloroethene	U		0.10				35
cis-1,2-Dichloroethene	U		0.10				35
Trichloroethene	U		0.10				35
Tetrachloroethene	0.49		0.10		0.48	2.06	35

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SURROGATE SUMMARY REPORT

Air TO-15 (Vapor Intrusion)

air

LAB NUMBER	1,2-DCE-d4	TOL-d8	4-BFB
1811003-01	116	103	97.9
1811003-02	115	104	98.6
1811003-03	115	103	102
1811003-04	113	103	98.9
1811003-05	111	103	99.2
1811003-06	110	102	100
1811003-07	107	102	99.7
1811003-08	104	102	96.5
1811003-09	104	101	97.1
B8K2801-BLK1	103	101	95.2
B8K2801-BS1	102	102	101
B8K2801-BS2	103	102	100
B8K2801-BSD1	106	102	101
B8K2801-BSD2	105	103	101
B8K2801-DUP1	105	101	96.3

			QC LIMITS
1,2-DCE-d4	=	1,2-Dichloroethane-d4	70 - 130
TOL-d8	=	Toluene-d8	70 - 130
4-BFB	=	4-Bromofluorobenzene	70 - 130

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Qualifiers

A	This sample was extracted at a single acid pH.
HTS	Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.
U	The analyte was not detected at or above the reporting limit.

Abbreviations and Symbols

ABN	Acid Base Neutrals (Semivolatile Compounds)
AES	Atomic Emission Spectrometer
BS	Blank Spike
CVAA	Cold Vapor Atomic Absorption
DCB	Decachlorobiphenyl
ECD	Electron Capture Detector
GC	Gas Chromatograph
ICP	Inductively Coupled Plasma
ISTD	Internal Standard
LCS	Laboratory Control Sample
MS	Mass Spectrometer
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NA	Not Applicable
NPD	Nitrogen Phosphorous Detector
NR	Not Reported
PCB	Polychlorinatedbiphenyl
RL	Reporting Limit
RT	Retention Time
RPD	Relative Percent Difference

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TCLP	Toxicity Characteristic Leaching Procedure
TCMX	Tetrachloro-meta-xylene
VOA	Volatile Organic Analysis
#	Out of QC limits
>LR	The result was greater than the linear range.

Initial pressure in air analyses is the pressure at which the canister was received in psia (pounds *per* square inch absolute pressure).

The pH reported for Volatile liquid samples was tested using a 0-14 pH indicator strip for the purpose of verifying chemical preservation.

The statistical software used for the reporting of toxicity data is ToxCalc 5.0.32, Environmental Toxicity Data Analysis System 1994-2007 Tidepool Scientific Software.

USEPA
DateShipped: 11/8/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-110718-081932-0060

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASBKG-1-11062018	H00289	TO-15 SIM	Air	11/6/2018	17:25	1	6 L Canister	Keal Case	-30	-4.5	Jason Stroup	9:17:00 AM	5:25:00 PM

Special Instructions: Tag = Canister ID

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	11/7/18 1600			
				11/8/18 ~~8:45~~ 9:45	11/7/18

USEPA
DateShipped: 11/8/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-110718-082944-0061

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASBKG-2-11062018	0283	TO-15 SIM	Air	11/6/2018	18:45	1	6 L Canister	Keal Case	-30	-4	Jason Stroup	10:45:00 AM	6:45:00 PM

Special Instructions: Tag = Canister ID

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	11/7/18 1600			
				11/8/18 9:45	
			Jeff Smith		

USEPA
DateShipped: 11/8/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-110718-083433-0062

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-101-11062018	0275	TO-15 SIM	Air	11/6/2018	18:25	1	6 L Canister	Keal Case	-30	-3	Jason Stroup	10:20:00 AM	6:25:00 PM

Special Instructions: Tag = Canister ID

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	11/7/18 1600			
			Jeff Smith	11/8/18 9:45	

USEPA
DateShipped: 11/8/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-110718-083512-0063

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-101-DUP-11062018	0169	TO-15 SIM	Air	11/6/2018	18:25	1	6 L Canister	Keal Case	-30	-3	Jason Stroup	10:20:00 AM	6:25:00 PM

Special Instructions: Tag = Canister ID

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	11/7/18 1600			
			Jeff Smith	11/8/18 9:45	

USEPA
DateShipped: 11/8/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-110718-085957-0064

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-102-11062018	0166	TO-15 SIM	Air	11/6/2018	18:27	1	6 L Canister	Keal Case	-30	-4	Jason Stroup	10:22:00 AM	6:27:00 PM

Special Instructions: Tag = Canister ID

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	11/7/18 1600			
				11/8/18 9:45	
			Jeff Smith		

USEPA
DateShipped: 11/8/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-110718-090358-0065

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-103-11062018	0182	TO-15 SIM	Air	11/6/2018	18:42	1	6 L Canister	Keal Case	-30	-4	Jason Stroup	10:40:00 AM	6:42:00 PM

Special Instructions: Tag = Canister ID

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	11/7/18 1600			
				11/8/18 9:45	

USEPA
DateShipped: 11/8/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-110718-090657-0066

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-104-11062018	H3444	TO-15 SIM	Air	11/6/2018	18:40	1	6 L Canister	Keal Case	-30	-6	Jason Stroup	10:38: 00 AM	6:40:0 0 PM

Special Instructions: Tag = Canister ID

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	11/7/18 1600			
				11/8/18 9:45	

USEPA
DateShipped: 11/8/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-110718-091018-0067

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-105-11062018	H3428	TO-15 SIM	Air	11/6/2018	17:32	1	6 L Canister	Keal Case	-30	-4.5	Jason Stroup	9:25:00 AM	5:32:00 PM

Special Instructions: Tag = Canister ID

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	11/7/18 1600			
			Jeff Smith	11/8/18 9:45	

USEPA
DateShipped: 11/8/2018
CarrierName: Delivered by EA

CHAIN OF CUSTODY RECORD
Site #: TXN000605460
Contact Name: Pat Appel
Contact Phone: 972-315-3922

No: 6-110718-091426-0068

Lab: EPA Region 6 Laboratory
Lab Phone: (281) 983-2137

Lab #	Location	Tag	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Start Pressure	Stop Pressure	Sampler	Start_ Time	Stop_ Time
	ASI-106-11062018	H3427	TO-15 SIM	Air	11/6/2018	17:30	1	6 L Canister	Keal Case	-30	-4.5	Jason Stroup	9:27:00 AM	5:30:00 PM

Special Instructions: Tag = Canister ID

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	EA	11/7/18 1600			
			Jeff Smith	11/8/18 9:45	

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